No. 16-1275	
Title:	Virginia Uranium, Inc., et al., Petitioners v. John Warren, et al.
Docketed:	April 25, 2017
Lower Ct:	United States Court of Appeals for the Fourth Circuit
Case Numbers:	(16-1005)
Decision Date:	February 17, 2017
Questions Presented	

DATE	PROCEEDINGS AND ORDERS
Apr 21 2017	Petition for a writ of certiorari filed. (Response due May 25, 2017)
May 02 2017	Consent the filing of amicus curiae briefs, in support of either party or of neither party, received from counsel for petitioners
May 17 2017	Waiver of right of respondents John Warren, et al. to respond filed.
May 23 2017	DISTRIBUTED for Conference of June 8, 2017.
May 25 2017	Brief amicus curiae of The Chamber of Commerce of the United States of America filed. (Distributed)
May 25 2017	Brief amici curiae of Senators Tom Cotton, et al. filed. (Distributed)
Jun 01 2017	Response Requested. (Due July 3, 2017)
Jun 15 2017	Order extending time to file response to petition to and including August 2, 2017.
Aug 02 2017	Brief of respondents John Warren, et al. in opposition filed.
Aug 15 2017	Reply of petitioners Virginia Uranium, Inc., et al. filed.
Aug 16 2017	DISTRIBUTED for Conference of 9/25/2017.

Oct 02 2017	The Solicitor General is invited to file a brief in this case expressing the views of the United States.
Apr 09 2018	Brief amicus curiae of United States filed. **Certificate of Word Count** **Main Document**
Apr 23 2018	Supplemental brief of respondents John Warren, et al. filed. (Distributed) **Main Document** **Certificate of Word Count** **Proof of Service**
Apr 24 2018	DISTRIBUTED for Conference of 5/10/2018.
May 14 2018	DISTRIBUTED for Conference of 5/17/2018.
May 21 2018	Petition GRANTED.
May 22 2018	Blanket Consent filed by Petitioners, Virginia Uranium, Inc., et al.. **Blanket Consent**
May 23 2018	Blanket Consent filed by Respondents, John Warren, et al.. **Blanket Consent**
May 24 2018	Joint motion for an extension of time to file the joint appendix and the opening briefs on the merits filed. **Main Document**
Jun 11 2018	Joint motion to extend the time to file the joint appendix and the opening briefs on the merits granted. The time to file the joint appendix and petitioners' brief on the merits is extended to and including July 19, 2018. The time to file respondents' brief on the merits is extended to and including August 27, 2018.
Jul 19 2018	Brief of petitioner Virginia Uranium, Inc., et al. filed. **Main Document** **Certificate of Word Count** **Proof of Service**
Jul 19 2018	Joint appendix filed. (Statement of costs filed) **Main Document** **Proof of Service**
Jul 26 2018	Brief amicus curiae of Chamber of Commerce of the United States of America filed. **Main Document** **Certificate of Word Count** **Proof of Service**
Jul 26 2018	Brief amicus curiae of Nuclear Energy Institute filed. **Main Document** **Certificate of Word Count** **Proof of Service**
Jul 26 2018	Brief amicus curiae of United States filed.

	Proof of Service **Main Document**
Jul 26 2018	Brief amici curiae of Former Nuclear Regulators filed. **Main Document** **Certificate of Word Count** **Proof of Service**
Jul 26 2018	Brief amici curiae of Entergy Operations, Inc. and Entergy Nuclear Operations, Inc. filed. **Main Document** **Certificate of Word Count** **Proof of Service**
Jul 26 2018	Brief amici curiae of Senator Tom Cotton, Senator Jim Inhofe, and Senator Ted Cruz filed. **Main Document** **Certificate of Word Count** **Proof of Service**
Aug 20 2018	SET FOR ARGUMENT on Monday, November 5, 2018
Aug 27 2018	Brief of respondents John Warren, et al. filed. **Main Document** **Certificate of Word Count** **Proof of Service**
Aug 29 2018	Motion of the Solicitor General for leave to participate in oral argument as amicus curiae and for divided argument filed. **Proof of Service** **Main Document**
Sep 04 2018	Brief amici curiae of States of Indiana, et al. filed. **Main Document** **Certificate of Word Count** **Proof of Service**
Sep 04 2018	Brief amici curiae of National Conference of State Legislators, et al. filed. **Main Document** **Certificate of Word Count** **Proof of Service**
Sep 04 2018	Brief amici curiae of The Roanoke River Basin Association, et al. filed. **Main Document** **Certificate of Word Count** **Proof of Service**
Sep 04 2018	Brief amici curiae of Preemption Law Professors filed. **Main Document** **Certificate of Word Count** **Proof of Service**
Sep 04 2018	Brief amici curiae of Members of the Southern Virginia Delegation to the Virginia General Assembly, et al. filed. **Main Document** **Certificate of Word Count** **Proof of Service**
Sep 10 2018	Record requested from the U.S.C.A. 4th Circuit.
Sep 12 2018	CIRCULATED
Sep 18 2018	The entire record from the U.S.D.C. Western Dist. of Virginia is electronic and located on PACER.

Sep 26 2018	Reply of petitioners Virginia Uranium, Inc., et al. filed. (Distributed) **Main Document** **Certificate of Word Count** **Proof of Service**
Oct 01 2018	Motion of the Solicitor General for leave to participate in oral argument as amicus curiae and for divided argument GRANTED.
Nov 05 2018	Argued. For petitioners: Charles J. Cooper, Washington, D. C.; and Noel J. Francisco, Solicitor General, Department of Justice, Washington, D. C. (for United States, as amicus curiae.) For respondents: Toby J. Heytens, Solicitor General of Virginia, Richmond, Va.

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RECORD AND BRIEFS

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No. _____

Supreme Court, U.S.
FILED
APR 21 2017
OFFICE OF THE CLERK

In The

Supreme Court of the United States

VIRGINIA URANIUM, INC., *et al.*,

Petitioners,

v.

JOHN WARREN, *et al.*,

Respondents.

On Petition For Writ Of Certiorari To The United States Court Of Appeals For The Fourth Circuit

PETITION FOR WRIT OF CERTIORARI

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QUESTION PRESENTED

This Court has held that the Atomic Energy Act ("AEA") "occupie[s] the entire field of nuclear safety concerns," *Pacific Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 212 (1983), and it has "defined the preempted field, in part, by reference to the motivation behind [a challenged] state law," *English v. General Elec. Co.*, 496 U.S. 72, 84 (1990). In accordance with these precedents, the Tenth Circuit has held that "a state cannot use its authority" over activities indisputably subject to State regulation as a pretextual "means of regulating radiological hazards" arising from activities entrusted by the AEA to the Nuclear Regulatory Commission ("NRC"). *Skull Valley Band of Goshute Indians v. Nielson*, 376 F.3d 1247-48 (10th Cir. 2004). *Accord, e.g.*, *Entergy Nuclear Vermont Yankee, LLC v. Shumlin*, 733 F.3d 393, 416 (2d Cir. 2013). In contrast, the divided panel below held that so long as a challenged state law "does not [on its face] purport to regulate an activity within the [AEA]'s reach," courts may *not* "conduct a pretext analysis" to "decipher whether the legislature was motivated" by radiological safety concerns." App.14a, 15a, 18a.

The question presented is:

Does the AEA preempt a state law that on its face regulates an activity within its jurisdiction (here uranium mining), but has the purpose and effect of regulating the radiological safety hazards of activities entrusted to the NRC (here, the milling of uranium and the management of the resulting tailings)?

PARTIES TO THE PROCEEDING

Petitioners Virginia Uranium, Inc., Cole Hill, LLC, Bowen Minerals, LLC, and Virginia Energy Resources, Inc. were the plaintiffs before the District Court and the plaintiffs-appellants in the Court of Appeals.

Respondents John Warren, in his official capacity as Director of the Virginia Department of Mines, Minerals and Energy, Bradley C. Lambert, in his official capacity as Deputy Director of the Virginia Department of Mines, Minerals and Energy, and James P. Skorupa, in his official capacity as Director of the Virginia Department of Mines, Minerals and Energy's Division of Mineral Mining, were defendants before the District Court and defendants-appellees in the Court of Appeals. Conrad Spangler, the former Director of the Virginia Department of Mines, Minerals and Energy, was also initially docketed by the Court of Appeals as an appellee, but the current director, John Warren, was substituted in his place on January 5, 2016, pursuant to FED. R. APP. P. 43(c)(2).

CORPORATE DISCLOSURE STATEMENT

Virginia Uranium, Inc., has as its sole parent corporation Virginia Energy Resources, Inc., located at 675 West Hastings Street, Suite 611, Vancouver, British Columbia, Canada, V5B 1N2. Virginia Energy Resources, Inc., joins in this Petition, and its corporate affiliations are listed below. No other publicly held corporation owns 10% or more of Virginia Uranium, Inc.'s stock.

Coles Hill, LLC, has no parent corporation, and there is no publicly held corporation that owns 10% or more of its stock.

Bowen Minerals, LLC, has no parent corporation, and there is no publicly held corporation that owns 10% or more of its stock.

Virginia Energy Resources, Inc., has no parent corporation. Sprott Resource Corp., located at Royal Bank Plaza, South Tower, 200 Bay Street, Suite 2750, P.O. Box 90, Toronto, Ontario, Canada, M5J 2J2, and Energy Fuels, Inc., located at 2 Toronto Street, Suite 500, Toronto, Ontario, Canada, M5C 2B6, are the sole publicly held corporations that own 10% or more of its stock.

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PETITION FOR WRIT OF CERTIORARI

Virginia Uranium, Inc., et al. ("Petitioners") respectfully petition for a writ of certiorari to review the judgment of the United States Court of Appeals for the Fourth Circuit.

OPINIONS BELOW

The panel opinion of the Court of Appeals is reported at 848 F.3d 590 and reproduced at App.1a. The order of the District Court granting Respondents' motion to dismiss is reported at 147 F. Supp. 3d 462 and reproduced at App.53a.

JURISDICTION

The Court of Appeals issued its judgment on February 17, 2017. This Court has jurisdiction under 28 U.S.C. § 1254(1).

CONSTITUTIONAL PROVISIONS AND STATUTES INVOLVED

The relevant portions of Article VI of the United States Constitution; Atomic Energy Act, Title 42, Chapter 23 of the United States Code; Title 10, Part 40 of the Code of Federal Regulations; Title 45.1 of the Virginia Code; and the Acts of the General Assembly of

the Commonwealth of Virginia are reproduced at App.83a.

INTRODUCTION

The Commonwealth of Virginia has banned the mining of the largest deposit of uranium in the United States. Because the ban – as the Commonwealth has itself conceded for purposes of this case – was motivated by concerns about the radiological safety of activities regulated by the federal government pursuant to the Atomic Energy Act ("AEA"), it is preempted under this Court's precedents and the uniform body of lower-court case law applying them. But a divided panel of the Fourth Circuit declined "to follow the paths forged by [its] sister circuits" in those cases, App.16a, instead upholding Virginia's ban based on a flawed approach to preemption under the AEA that runs directly contrary to this Court's precedent and the previous decisions of "each Court of Appeals [to have] address[ed] the issue," App.42a (Traxler, J., dissenting). Because the panel opinion below creates a division of authority over an issue of profound national importance – the basic allocation of regulatory power over atomic energy and radiological safety and access to a strategically critical national resource – this Court should grant review and reverse the Fourth Circuit's decision.

Recognizing that the production and use of atomic energy is "vital to the common defense and security"

and must therefore "be regulated in the national interest," 42 U.S.C. § 2012(a), (c), Congress "has occupied the entire field of nuclear safety concerns, except the limited powers expressly ceded to the states." *Pacific Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n* ("*PG&E*"), 461 U.S. 190, 212 (1983). In particular, States may regulate activities that fall within the purview of the Act only "for purposes *other* than protection against radiation hazards." 42 U.S.C. § 2021(k) (emphasis added). A state regulation of such activities that is "grounded in [radiological] safety concerns falls squarely within the prohibited field." *PG&E*, 461 U.S. at 213.

The Commonwealth's prohibition of uranium development transgresses the limits imposed by the AEA. While the AEA generally leaves to the States the authority to regulate the *mining* of uranium, the statute prohibits such regulation if its purpose is "protection against radiation hazards," § 2021(k), arising from activities the AEA has placed in the regulatory purview of the Nuclear Regulatory Commission ("NRC"). Here, all agree that the AEA vests the NRC with the exclusive power to regulate the radiological safety of both the milling of uranium ore and the safe handling and storage of the leftover "tailings." And the overriding purpose and motivation behind the Commonwealth's mining ban have nothing to do with mining, but are instead based on Virginia's concerns about the radiological safety of milling and tailings management. Because Virginia's ban is thus "grounded in [radiological] safety concerns" relating to activities that

are within the jurisdiction of the NRC, it "falls squarely within the prohibited field," and it cannot stand. *PG&E*, 461 U.S. at 213.

As Judge Traxler recognized in dissent below, this conclusion follows directly from each one of the Court of Appeals decisions that have previously dealt with a State's attempt to indirectly regulate the radiological safety of activities committed to the NRC's superintendence by *pretextually* regulating an activity within state jurisdiction. In *Skull Valley Band of Goshute Indians v. Nielson*, 376 F.3d 1223 (10th Cir. 2004), for example, the Tenth Circuit struck down Utah's attempt to prevent the storage of spent nuclear fuel within the State by, *inter alia*, banning the transportation of that material on key state roads and preventing local governments from providing basic municipal services, like police and fire protection or water access, to any facility built to store the fuel. The fact that these laws on their face pertained only to "matters that have been traditionally regulated by local governments" was irrelevant, the Tenth Circuit held, because under this Court's decision in *PG&E* "a state cannot use its authority to regulate law enforcement and other similar matters as a means of regulating radiological hazards" entrusted to federal care. *Id.* at 1247-48. *See also Entergy Nuclear Vermont Yankee, LLC v. Shumlin*, 733 F.3d 393, 415-23 (2d Cir. 2013); *Pacific Legal Found. v. State Energy Res. Conservation & Dev. Comm'n*, 659 F.2d 903, 922-23 (9th Cir. 1981), *aff'd*, *PG&E*, 461 U.S. 190 (1983).

Utah petitioned this Court for review of the Tenth Circuit's decision in *Skull Valley*, and the Court asked the Solicitor General to express the views of the United States. *Nielson v. Private Fuel Storage, LLC*, 543 U.S. 1047 (2005). In contrast to the panel majority in this case, the Solicitor General explained that this Court's precedents confirm "that part of 'the pre-empted field is defined by reference to the purpose of the state law.'" Brief for the United States as Amicus Curiae at 12, *Nielson v. Private Fuel Storage, LLC* (No. 04-575) (Nov. 2005), App.316a (quoting *English v. General Elec. Co.*, 496 U.S. 72, 84 (1990)). Because Utah did "not dispute that the purpose of the [challenged] provisions is to prevent the transportation and storage of" materials regulated exclusively by the NRC, *id.* at 17, App.322a (quotation marks omitted), the Solicitor General concluded that the Tenth Circuit had "applied well-established legal principles governing . . . preemption," App.313a, and further review was unwarranted. The Court denied certiorari. *Nielson v. Private Fuel Storage, LLC*, 546 U.S. 1060 (2005).

The panel majority in this case refused "to look past [the challenged] statute's plain meaning to decipher whether the legislature was motivated" by radiological safety concerns relating to uranium milling and tailings storage, App.14a, even though the Commonwealth itself conceded this was in fact its purpose, App.29a (Traxler, J., dissenting). Instead, the court held that it need not conduct "a pretext analysis to ascertain a legislature's true motive" to determine the preemptive scope of the AEA. App.15a.

The decision below directly contravenes this Court's holdings tying the boundaries of the field preempted by the AEA to the State's purpose, and it creates a Circuit split on this critical issue. The ruling below also has profoundly dangerous implications for the scope of federal authority over atomic energy and radiological safety generally, and it frustrates the purposes and objectives of the AEA by blocking private development, under the close regulation of the NRC, of the Nation's largest deposit of uranium at a time when the United States must depend upon foreign sources for 94 percent of its uranium supply – much of which comes from Russia or its client states.

This Court should grant the writ.

STATEMENT

I. Domestic Production and Use of Uranium and the Coles Hill Deposit

Nuclear reactors powered by uranium generate about 20 percent of the electricity consumed in the United States – all without significant production of greenhouse gases. App.202a. Uranium is also critical to national security. It is a necessary ingredient, of course, in our arsenal of nuclear weapons, App.4a, and it powers our Nation's fleet of over 80 nuclear submarines and aircraft carriers, App.397a.

The United States has an acute economic and strategic interest in securing a domestic supply of uranium. Indeed, federal legislation gives the Secretary of Energy "a continuing responsibility for the domestic uranium industry to encourage the use of domestic uranium," in furtherance of "the national need to avoid dependence on imports" of the material. 42 U.S.C. §§ 2296b-3(a), 2296b-6(a). But notwithstanding this "national need," 94 percent of the uranium used to supply the Nation's atomic energy needs is imported. App.353a. Even more troubling, 17 percent of those imports come from Russia, and another 22 percent come from Russia-allied states Kazakhstan and Uzbekistan. App.352a.

As the United States emphasized before this Court in a 2008 case involving imports of low-enriched uranium, ensuring the domestic supply of uranium is thus "a matter of compelling importance to U.S. national security interests." Petition for Writ of Certiorari at 30, *United States v. Eurodif, S.A.*, No. 07-1059 (Feb. 2008), App.347a. Relying on Russian-controlled sources of uranium would not only "leave the Russian Federation as the predominant supplier of enriched uranium for domestic electricity generation," it also "threatens the United States' ability to produce materials critical to military operations." *Id.* at 31, App.349a.

Petitioners own a deposit of approximately 119 million pounds of uranium ore that lies beneath the Coles Hill estate in Pittsylvania County, Virginia. App.201a. It is the largest known deposit of uranium in the United States and one of the largest in the

world. *Id.* Mining that uranium would be an economic boon for the region, creating an estimated 1,052 annual jobs and generating nearly $5 billion of net revenue for local businesses. App.202a.

Conventional uranium production involves three basic processes: mining, milling, and tailings management. First, the uranium ore must be extracted from the ground. The uranium ore must then be milled or processed into usable form. An on-site uranium mill grinds the uranium ore into a sand, which is then run through either an acidic or alkaline solution to separate the pure uranium from the waste rock commonly known as "tailings." The uranium is then concentrated into "yellowcake," which is commercially sold and shipped off-site for enrichment. App.203a. Finally, the tailings, which remain radioactive, must be permanently secured in a tailings management facility. App.204a.

II. The AEA's Regulatory Framework

Shortly after the dawn of the atomic age, Congress enacted the AEA in 1946 with the twin purposes of "encourag[ing] the private sector to become involved in the development of atomic energy for peaceful purposes," *PG&E*, 461 U.S. at 207, and ensuring that the "processing and utilization" of uranium is "regulated in the national interest and in order to . . . protect the health and safety of the public," 42 U.S.C. § 2012(d). Accordingly, the AEA, as amended, vests the NRC with authority to establish regulatory limits and controls

necessary to ensure against the radiological safety hazards posed by the domestic production of nuclear energy, including the development of uranium.

The AEA requires an NRC license for the transfer, delivery, or possession of "source material," which is defined to include uranium, 42 U.S.C. § 2014(z), only "after removal from its place of deposit in nature." 42 U.S.C. § 2092. At the outset, Congress chose not to regulate uranium mining itself because it concluded that (i) ordinary mining itself does not pose serious radiological hazards; and (ii) regulation of uranium mining would undermine Congress's policy of encouraging the development of atomic energy by discouraging uranium mining and prospecting. S. REP. NO. 79-1211, at 18 (1946), App.373a; *see also Atomic Energy: Hearings on H.R. 4280 Before the H. Comm. on Military Affairs*, 79th Cong. 125 (1945), App.376a.

Of particular relevance to the issues in this case, the Act grants the NRC exclusive regulatory jurisdiction over the radiological safety of uranium milling and tailings management. The Act requires that anyone who wishes to "transfer or receive in interstate commerce, manufacture, produce, transfer, acquire, own, possess, import, or export" any radioactive "byproduct material" – specifically defined to include "the tailings or wastes produced by the extraction or concentration of uranium" – must first receive a license from the NRC. 42 U.S.C. §§ 2014(e)(2), 2111(a)-(b). And the NRC has promulgated detailed and extensive regulations governing the design, construction, and operation of a tailings management facility, designed to

block the pathways through which radioactive elements might be exposed to the surrounding environment. 10 C.F.R. Pt. 40, App. A.

The provision of the Act that is at the heart of this case permits States, with narrow exceptions, to regulate "activities," including activities committed to the NRC's regulatory jurisdiction, but only "for purposes *other than protection against radiation hazards*." 42 U.S.C. § 2021(k) (emphasis added). Congress has long premised this policy on its conclusion that the NRC "was more qualified to determine what type of safety standards should be enacted in this complex area." *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 250 (1984). This Court has thus repeatedly held that the federal government has "occupied the entire field of nuclear safety concerns." *PG&E*, 461 U.S. at 212. The scope of this preempted field extends to any state regulation that is enacted and enforced *for the purpose* of protecting against radiation hazards relating to an activity within the NRC's regulatory authority, such as uranium milling and tailings storage, even where the activity the State seeks to regulate is otherwise within the State's traditional police powers.

III. Virginia's Ban on Uranium Mining

In 1982, shortly after the Coles Hill deposit was discovered, the Virginia General Assembly enacted a temporary moratorium on uranium mining. Act of Apr. 7, 1982, ch. 269, 1982 Va. Acts 426, App.170a. A year later, the ban was effectively made permanent:

> Notwithstanding any other provision of law, permit applications for uranium mining shall not be accepted by any agency of the Commonwealth prior to July 1, 1984, and until a program for permitting uranium mining is established by statute.

VA. CODE § 45.1-283.

Though Section 45.1-283 is literally phrased as a ban on "uranium mining," *id.*, the public record leaves no doubt that the mining ban was and is motivated by radiological safety concerns related to uranium milling and tailings management activities – matters that all agree are within the exclusive regulatory jurisdiction of the NRC and are thus beyond the State's authority. Indeed, in the same 1983 Act that extended the mining "moratorium" indefinitely, the Virginia Legislature simultaneously created an official working-group – the Uranium Administrative Group ("UAG") – which it directed to conduct an in-depth "evaluation of the costs and benefits" of uranium development, App.178a, including specifically a number of potential radiological safety concerns arising out of milling and tailings management activities, App.184a-85a (directing UAG to analyze, *inter alia*, the "reagents and processing materials to be used" in milling operations, the "quantity and quality of liquid and solid wastes," the "quantity and characteristics of the tailings," the "method of disposal," and the potential "atmospheric releases and the methods for controlling such releases"). The Act thus makes clear that while the operative language of the ban may have referred only to mining – the first,

necessary step in the mining, milling, tailings storage sequence – its overriding purpose was to bar milling and tailings management operations based on concerns about the radiological safety of those activities.

When the Commonwealth formally reconsidered the ban on uranium development from 2008 to 2013,[1] its ultimate refusal to permit uranium mining was again grounded squarely in radiological safety concerns about milling and tailings management. The evidence of this is overwhelming. To take a single example, 31 members of the General Assembly issued public statements expressing their opposition to lifting the ban, and every single one cited radiological health and safety concerns; all but two of them referenced fears that uranium tailings would contaminate the water. App.239a-97a.

In short, the Commonwealth enacted and has maintained the ban on uranium mining based predominantly, if not exclusively, on its view that NRC regulation of uranium milling and tailings management operations is not sufficiently robust to protect against radiation hazards.

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[1] Beginning in the late 1980s, the price of uranium plummeted, exploiting the Coles Hill deposit was not economically viable, and as a result no further action was taken until the price rebounded. From 2008 to 2013, Petitioners attempted to convince the Commonwealth to repeal the ban. While the Commonwealth produced several new studies reevaluating the issue, and legislators introduced a bill that would have lifted the ban, opponents of uranium development succeeded in keeping the ban in place.

IV. Proceedings Below

1. After the legislative effort to repeal the ban failed, Petitioners filed a complaint in the Western District of Virginia, seeking to enjoin enforcement of the Commonwealth's ban on the ground that it is preempted by the AEA. The District Court had jurisdiction over the action under 28 U.S.C. § 1331.

Petitioners alleged that the purpose of the uranium mining ban was to protect against radiological safety hazards related to milling and tailings management. App.216a, 222a, 232a. The defendants – Respondents here – moved to dismiss the complaint for failure to state a claim, and thus conceded for purposes of their motion that the purpose of the ban was indeed to protect against radiation hazards arising from milling and tailings operations. Respondents conceded that the AEA gives the NRC exclusive regulatory jurisdiction over the radiological safety of uranium milling and tailings activities, but argued that the State has unfettered authority to regulate uranium mining, even where, as here, the purpose of the prohibition against mining is actually to prohibit milling and tailings operations on the basis of radiological safety concerns. Petitioners cross-moved for summary judgment, arguing that the text of the AEA and this Court's decisions in *PG&E* and later cases compelled the conclusion that the ban was preempted. Petitioners' summary judgment motion was supported by over 700 pages of exhibits demonstrating that the overriding purpose of the mining ban was to bar the milling of

uranium ore and the storage of tailings in the Commonwealth.

The District Court granted the Commonwealth's motion to dismiss and denied Petitioners' cross-motion for summary judgment. App.53a. The court held that Virginia's ban on uranium mining was not preempted because "[t]he AEA institutes no permitting regime respecting nonfederal uranium deposits' conventional mining and does not otherwise regulate nonfederal uranium deposits or their conventional mining." App.68a. The court deemed it entirely irrelevant that "the General Assembly enacted [the uranium mining ban] out of concern for uranium (and, therefore, radiological) safety," App.69a, because the Commonwealth "asserted the right to act," as a formal matter, only on an "activity or material" – uranium mining – over which "the AEA is silent and confers no authority," App.78a.

The court held that "there is no occasion to inquire into [the ban's] purpose." *Id.* *PG&E*'s clear statements to the contrary, the court concluded, were nonbinding dicta that the court was free to ignore. "Rather than . . . extrapolating *Pacific Gas & Electric Co.*'s dicta and selecting among the opinion's (at times) seemingly-inconsistent language, this Court will adhere to the surer conclusion by scrutinizing the statutes uniquely before it and addressing their interaction under intelligible and longstanding principles of preemption." App.79a.

2. A divided panel of the Fourth Circuit affirmed. App.1a-20a. The panel majority acknowledged that Section 2021(k) of the AEA, as construed by this Court in *PG&E*, "prohibits states from regulating, for [radiological] safety reasons, activities that are in any way regulated by the federal government under the Atomic Energy Act." App.11a (quotation marks omitted). And the majority further conceded that "uranium milling and tailings storage are 'activities' under Section 2021(k) because they are regulated by the NRC," and "states may therefore not regulate them except for purposes other than protection against radiation hazards." App.13a-14a.[2] Moreover, the majority accepted the Commonwealth's concession (at least for purposes of the motion to dismiss) that the purpose of the ban on uranium mining was to prohibit uranium milling and tailings storage activities based on radiological safety concerns. App.10a ("the Commonwealth concedes that it lacks a non-safety rationale for banning uranium mining"). In short, the majority conceded all

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[2] The majority also addressed whether "uranium mining" itself, as opposed to milling and tailings storage, "is an 'activity' under Section 2021(k) of the Atomic Energy Act, which . . . states can't regulate . . . for the purpose of protecting against radiation hazards." App.8a. The majority ultimately concluded that mining is not such an activity. App.13a. But that issue does not merit this Court's review, nor is it necessary to resolve in order to reach the question presented here, because all agree that *milling and tailings management are* "'activities' under Section 2021(k)" that States may not regulate for radiological safety reasons, App.13a, and it is *those* activities that, by Virginia's own admission, its ban deliberately targets.

of the elements of field preemption under the AEA, and that should have been the end of the case.

Nevertheless, the majority held that it need not inquire into the purpose of Virginia's mining ban. App.14a-15a. Observing that "[t]here are some areas of law – such as actions arising under the Equal Protection Clause of the Fourteenth Amendment" where "we may conduct a pretext analysis to ascertain a legislature's true motive," the court reasoned that "this is not such a case" because Petitioners have "not allege[d] that the Virginia legislature acted with discriminatory intent. . . ." App.15a. Accordingly, because the Commonwealth's statute facially bans only the mining of uranium and "does not mention uranium milling or tailings storage," the majority declined "to look past the statute's plain meaning to decipher whether the legislature was motivated to pass the ban by a desire to regulate uranium milling [and] tailings." App.14a.

The majority did not explain how blinding itself to the Commonwealth's motivation for the ban could be reconciled with this Court's clear, repeated holdings that the AEA's preemptive scope is "defined . . . by reference to the motivation behind the state law," *English*, 496 U.S. at 84, and that a state regulation "grounded in [radiological] safety concerns" thus "falls squarely within the prohibited field," *PG&E*, 461 U.S. at 213.

The majority also declined Petitioners' urging that it "follow the paths forged by our sister circuits in *Skull Valley* . . . and *Entergy*." App.16a. The Second and Tenth Circuits, in those cases, directly repudiated the

proposition that a court could, consistent with this Court's precedents, "blindly accept the articulated purpose of a state statute," *Entergy*, 733 F.3d at 416 (brackets omitted), and permit a State to use its authority over activities left within its jurisdiction "as a means of regulating radiological hazards," *Skull Valley*, 376 F.3d at 1248. Both courts based their respective holdings that the state laws at issue were preempted on the very "pretext analysis" that the panel majority here refused to undertake. App.15a. While the majority asserted that both cases "are distinguishable" because the preempted state laws expressly "targeted" activities within the NRC's exclusive jurisdiction, App.16a, this purported distinction does not bear even minimal scrutiny. *See infra* at 27-33.

Finally, the majority concluded that the Commonwealth's ban was not preempted "as an obstacle to the full implementation of the objectives of the Atomic Energy Act," reasoning that the ban could have "little effect" on the Act's "stated purpose of promoting the safe development and use of atomic energy." App.18a, 19a. That was so, according to the majority, because "over ninety percent of the uranium used by the country's atomic energy industry is imported," and in any event, the AEA "allows the federal government to forcibly expand the production of domestic source material" by taking, through eminent domain, any "real property containing deposits" of uranium. App.19a. The majority did not attempt to reconcile its conclusion with this Court's holding that, at least since 1954, Congress has

"determin[ed] that the national interest would be best served if the Government encouraged the *private sector* to become involved in the development of atomic energy for peaceful purposes under a program of federal regulation and licensing. . . ." *PG&E*, 461 U.S. at 207 (emphasis added).

3. Judge Traxler dissented. This Court's opinions in *PG&E* and *English* "make[] clear that the AEA preempts state statutes enacted for the purpose of protecting against the radiological dangers of activities the AEA regulates." App.52a (Traxler, J., dissenting). And "[b]ecause the Commonwealth has conceded at this point in the litigation that its statute was enacted for just that purpose, the Virginia statute clearly falls within that prohibited field." *Id.* Indeed, Judge Traxler noted that this conclusion follows *a fortiori* from *PG&E*, where "California claimed that the moratorium [at issue] was actually grounded on a non-safety concern." In contrast, "*the Commonwealth makes no such claim here.* Rather, . . . the Commonwealth *concedes* . . . that the moratorium is grounded on the Virginia legislature's concerns regarding the radiological safety of uranium ore milling and tailings storage." App.40a-41a.

The majority departed from this Court's precedents and created a Circuit conflict, Judge Traxler concluded, by refusing to consider whether the ban was enacted for preempted purposes simply because "the *substance* of Virginia's law – a ban on conventional uranium mining – does not conflict with the Act." App.39a. Judge Traxler explained that the same was

true of the law at issue in *PG&E*, yet the Court there "held [that] a statute's *purpose* can itself bring the statute within the prohibited field." App.39a (citing *PG&E*, 461 U.S. at 213; *English*, 496 U.S. at 84). Judge Traxler further emphasized that, "[u]ntil today, each Court of Appeals addressing the issue since *Pacific Gas* has held that state statutes enacted to protect against the radiological dangers of activities the AEA regulates are preempted *regardless of whether the statutory text reveals that purpose and regardless of whether the statute expressly prohibits an activity the Act regulates*." App.42a.

The Tenth Circuit's decision in *Skull Valley* squarely held that "regardless of the nature of the activity the [challenged] provisions directly addressed, the applicable preemption analysis 'requires consideration of the *purpose* of the allegedly preempted statute.'" App.43a (quoting *Skull Valley*, 376 F.3d at 1252 (emphasis added by Judge Traxler)). And the Second Circuit in *Entergy* likewise struck down a Vermont law based on "*extra*-textual indicia" showing "that radiological safety concerns were the primary purpose for the statute's enactment" – despite a statement in "[t]he text of the Vermont law" that "explicitly declared that the statute was *not* grounded in nuclear safety concerns." App.45a, 46a (quotation marks omitted) (citing *Entergy*, 733 F.3d at 417-22). Virginia's ban falls within the AEA's preempted field, Judge Traxler concluded, under "the very same principles." App.47a.

Finally, Judge Traxler also would have held that the Commonwealth's ban is preempted as an obstacle

to the AEA's purposes and objectives. The Act's central objective "was to ensure that . . . the power of the private sector could be unleashed to develop nuclear energy." App.47a. But "Virginia, not trusting that the federal government has sufficiently protected against the radiological dangers of uranium milling and tailings management, has unilaterally sought to *prevent the involvement of the very private-sector forces that the Act was designed to unleash.*" App.47a-48a.

REASONS FOR GRANTING THE WRIT

I. The Decision Below Directly Contravenes This Court's Precedents and Creates a Conflict in the Circuits.

Notwithstanding this Court's repeated instruction that the AEA's "pre-empted field" is defined, "in part, by reference to the motivation behind [a challenged] state law," *English*, 496 U.S. at 84, the panel majority below cast its refusal "to examine why the Commonwealth chose to ban uranium mining" as "adher[ing] to the edict that courts will not strike down an otherwise constitutional statute on the basis of an alleged illicit legislative motive," App.15a (quotation marks omitted). Focusing solely on "the Commonwealth's two-sentence moratorium on uranium mining," the majority emphasized that "the plain language of the Commonwealth's ban does not mention uranium milling or tailings storage." App.14a, 17a. And that, according to the majority, was the end of the case: "[T]he Commonwealth's mining ban does not purport to regulate an

activity within the Act's reach, and thus we need proceed no further." App.17a-18a.

The panel majority thus refused "to engage in the sort of pretext analysis" undertaken by other courts of appeals "to decipher whether the legislature was motivated to pass the ban by a desire to regulate uranium milling or tailings storage." App.14a, 17a. In so doing, the majority blinded itself to several inconvenient facts. First, it ignored the fact that the two-sentence ban on uranium mining was just one part of a statutory scheme that included a lengthy companion provision requiring an in-depth study of the radiological safety issues associated with uranium milling and tailings storage. Second, the majority ignored a trial court record teeming with evidence that the genuine purpose of the uranium mining ban was to protect the Commonwealth against the radiological hazards of uranium milling and tailings storage. Finally, and most remarkably, the majority blinded itself to the Commonwealth's *admission* (at least for purposes of its motion to dismiss) that its true motivation for banning uranium mining was to protect against the radiological hazards of uranium milling and tailings storage. The majority thus refused to engage in a "pretext analysis" of the mining ban even in the face of the Commonwealth's admission that the ban was in fact a pretext.

The decision below simply cannot be squared with the AEA or with this Court's decisions interpreting it. Nor can the majority's holding be reconciled with the "Court of Appeals [decisions] addressing the issue since *Pacific Gas*," all of which have "held that state

statutes enacted to protect against the radiological dangers of activities the AEA regulates are preempted *. . . regardless of whether the statute expressly prohibits an activity the Act regulates.*" App.42a (Traxler, J., dissenting). The Court should grant certiorari to resolve the conflict in the circuits created by the decision below on this question of overriding importance to our Nation's economic and national security.

A. The Decision Below Contravenes This Court's Holdings in *PG&E* and *English*.

The text of Section 2021(k) of the AEA authorizes the States "to regulate activities," including activities within NRC's regulatory jurisdiction, "for purposes *other than* protection against radiation hazards." 42 U.S.C. § 2021(k) (emphasis added).[3] Congress has thus unambiguously demarcated the scope of the field preempted by the AEA by reference to the "purposes" that States may pursue when enacting regulations of any such activity. *See PG&E*, 461 U.S. at 210.

This Court's holding in *PG&E* cements this understanding of the AEA's preemptive scope. In that case, California had imposed a "moratorium" on the construction of new nuclear power plants until such time as a state commission determined that "there has been

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[3] The AEA separately permits States to enter an "agreement" with the NRC permitting them to regulate activities otherwise subject to exclusive federal regulation, 42 U.S.C. § 2021(b), but the Commonwealth's agreement does not extend to uranium milling or tailings management. App.298a, 301a.

developed . . . a demonstrated technology or means for the disposal of high-level nuclear waste." *PG&E*, 461 U.S. at 198. In analyzing the validity of that moratorium under the AEA, the Court recognized that the Act did not directly preempt California's moratorium in express terms, for it "does not at any point expressly require the States to construct or authorize nuclear power plants or prohibit the States from deciding, as an absolute or conditional matter, not to permit the construction of any further reactors." *Id.* at 205.

The Court thus turned to the question whether the State's regulation "falls within the field that the federal government has preserved for its own exclusive control." *Id.* at 204. Quoting Section 2021(k), the Court held that "the distinction drawn [by the AEA] between the spheres of activity left respectively to the federal government and the states" turns on the *purpose* of the State regulation. *Id.* at 210. While "the States retain their traditional responsibility in the field of regulating electrical utilities for determining questions of need, reliability, cost and other related state concerns," the AEA's text dictated "that the federal government should regulate the radiological safety aspects involved in the construction and operation of a nuclear plant." *Id.* at 205.

Accordingly, the Court held, "[a] state moratorium on nuclear construction grounded in safety concerns falls squarely within the prohibited field," *id.* at 213, even though a State prohibition on the construction of nuclear power plants for any other reason would not be preempted. "That being the case, it is necessary to

determine whether there is a non-safety rationale for [California's moratorium]." *Id.* This Court ultimately accepted the Ninth Circuit's determination – based on a review of the pertinent legislative history – that the moratorium "was aimed at economic problems, not radiation hazards," *id.*, and upheld the California statute.[4]

Any doubt about the governing test adopted by *PG&E* was eliminated by this Court's subsequent opinions. In *English*, this Court explicitly reaffirmed *PG&E*'s holding that "the [AEA's] pre-empted field is defined by reference to the *purpose* of the state law in question." 496 U.S. at 84 (emphasis added); *accord Silkwood*, 464 U.S. at 249. *English* emphasized that courts must determine the law's purpose "by reference

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[4] The majority below read *PG&E* as foreclosing any "searching scrutiny of legislative intent." App.15a, pointing to dicta in the opinion describing the "inquiry into legislative motive" as "often an unsatisfactory venture." *PG&E*, 461 U.S. at 216; *see* App.15a. But the statement from *PG&E* relied upon by the court below did not suggest that the State's true purpose could be ignored; the Court merely adverted to the difficulty of ascertaining it and to the importance of affording some measure of latitude before concluding that "a state has misused the authority left in its hands." 461 U.S. at 216. Had the *PG&E* Court really adopted the panel majority's stance of *willful blindness* to a State's genuine motive, it obviously: (1) would not have erected a test that expressly turns on whether the challenged law is "grounded in safety concerns." *id.* at 213; (2) would not have stated that "it is necessary to determine whether there is a non-safety rationale" for the challenged ban or discussed, at length, the legislative history of the state law, *id.* at 213-16; and (3) would have corrected Justice Blackmun's characterization of the Court's opinion as adopting "the elusive test of legislative motive," *id.* at 229 (Blackmun, J., concurring in part).

to the motivation behind the state law," and in accordance with "the state law's actual effect." 496 U.S. at 84. Thus, courts are not free to blind themselves, as did the majority below, to evidence (let alone an *admission*) that a state law's true purpose and effect is to "protect[] against radiation hazards" of activities that are subject to regulation by the NRC pursuant to the AEA. *Id.* (quoting 42 U.S.C. § 2021(k)).

B. The Decision Below Conflicts with the Tenth Circuit's Holding in *Skull Valley*.

The Tenth Circuit's opinion in *Skull Valley* is directly contrary to the decision below. The court in that case struck down a variety of Utah laws designed to prevent the storage of spent nuclear fuel ("SNF") within the State. Although the federal government has exclusive authority over the radiological safety aspects of SNF storage, Utah attempted to prevent its storage within its borders by enacting a series of restrictions that ostensibly regulated activities that were squarely within the State's police power. One provision barred "counties from providing 'municipal-type services,' including fire protection, garbage disposal, water, electricity, and law enforcement, to SNF transportation and storage facilities within the county." 376 F.3d at 1245.

It is difficult to conceive of an activity closer to the heart of a State's traditional police power – and more remote from the activities regulated by the NRC – than the provision of utilities, police and fire protection, and

sewer access. But because Utah's regulation of those activities was motivated by radiological safety concerns related to an activity within the NRC's regulatory jurisdiction, the Tenth Circuit concluded that this regulation of ordinary municipal services fell within the AEA's preempted field.

> Although it is true that the County Planning Provisions address law enforcement, fire protection, waste and garbage collection and other similar matters that have been traditionally regulated by local governments, that fact does not trump the preemption analysis that the controlling Supreme Court decisions require us to undertake. Under that analysis, we consider the purpose and effect of the state law at issue, and, as a result, *a state cannot use its authority to regulate law enforcement and other similar matters as a means of regulating radiological hazards.*

Id. at 1247-48 (emphasis added).

Another provision adopted by Utah took control of "the only road permitting access to the [proposed spent fuel storage] facility . . . by designating it as a state highway," and then "requir[ed] the consent of the governor and the state legislature" before any "company engaged in the transportation or storage of SNF" was allowed to drive on it. *Id.* at 1252. The AEA, of course, does not regulate the use of state roads, and ordinarily it would not preempt the exercise of a State's traditional police power over those roads. But that did not

stop the Tenth Circuit from striking this provision down.

> [W]e are required to follow the preemption analysis set forth in *Pacific Gas*, *Silkwood*, and *English*, *which requires consideration of the purpose of the allegedly preempted statute*, along with its effects. Here, the evidence cited by the district court indicates that the Road Provisions were enacted in order to prevent the transportation and storage of SNF in Utah. . . . The record thus establishes that the Road Provisions were enacted for reasons of radiological safety and are therefore preempted.

Id. (emphasis added) (citations omitted).

The panel majority below asserted that *Skull Valley* is "distinguishable," App.16a, because the Utah laws struck down by the Tenth Circuit "surgically targeted the transportation and storage of spent nuclear fuel" – "an activity regulated by the NRC." *Id.* But Petitioners have alleged, and Respondents *concede* at least for purposes of the motion to dismiss before the Court, that the ban on uranium mining likewise targets "uranium milling and uranium tailings management" based on "the legislature's radiological safety concerns." App.29a (Traxler, J., dissenting). On this point, the two cases are on all fours.

The panel majority also contended that "unlike Virginia's ban on mining, all but two of the challenged Utah laws specifically mentioned th[e] NRC-regulated activity" – storage of SNF. App.16a. But this purported

distinction also fails to create any daylight between the two decisions, for the Tenth Circuit also struck down the two laws that *did not* mention SNF. And it did so based on reasoning that *directly repudiates* the approach adopted below. Whereas the majority refused to "look past the statute's plain meaning to decipher whether the legislature was motivated to pass the ban by [preempted reasons]," App.14a, the Tenth Circuit *rejected* Utah's invitation to adopt that approach, reasoning instead that "the controlling Supreme Court decisions require us to . . . consider the purpose and effect of the state law at issue, and, as a result, a state cannot use its authority to regulate law enforcement and other similar matters as a means of regulating radiological hazards." *Skull Valley*, 376 F.3d at 1247-48. The panel majority was thus simply wrong to suggest that *Skull Valley* did not "engage in the sort of pretext analysis that Virginia Uranium presses here." App.17a.

The majority below further suggested that even though two of the Utah provisions did not "specifically mention[]" any "NRC-regulated activity," those laws could be distinguished from Virginia's mining ban because they "w[ere] packaged with . . . [other] regulations targeting spent nuclear fuel directly." App.16a. But yet again, the same is true of Virginia's law. The 1983 Act establishing the mining ban in its current form was "packaged with" other provisions that "targeted" uranium milling and tailings operations directly. As noted earlier, that Act created a state agency and tasked it with studying milling and tailings on the most granular level – from "the capacity of the mill"

and the type of "reagents and processing materials to be used," to the "size of the tailings disposal area" and its "hydrology, hydrogeology, and surficial and bedrock geology" – so that it could produce a report detailing "the costs and benefits" of lifting the ban. Act of Feb. 24, 1983, ch. 3, 1983 Va. Acts 3, App.177a-89a.

Nor was the majority correct in asserting that Virginia's ban "pales in comparison to Utah's comprehensive scheme intended to keep spent nuclear fuel out of the State," App.17a – at least not with respect to the comparative likelihood that the two laws would successfully prohibit the disfavored activity in the state. Mining uranium out of the ground is a necessary antecedent to milling it and storing the resulting tailings – no less than transporting SNF over the only road leading to the storage facility is a necessary antecedent to storing it there. By banning the first activity in this chain of events – uranium mining – Virginia has achieved its objective – effectively banning uranium milling and tailings management operations – even though the regulatory safety aspects of those activities are regulated exclusively by the NRC pursuant to the AEA.

After the Tenth Circuit's decision in *Skull Valley*, Utah petitioned this Court for certiorari, and the Court asked for the views of the Solicitor General on whether review should be granted. *Nielson v. Private Fuel Storage, LLC*, 543 U.S. 1047 (2005). The Solicitor General "wholeheartedly endorsed the Tenth Circuit's analysis and took the view that certiorari should be denied." App.44a n.16 (Traxler, J., dissenting).

Specifically, the United States' brief in this Court rejected Utah's argument that its "purpose in protecting against radiation hazards does not bring the challenged legislation within the preempted field." Brief for the United States as Amicus Curiae at 12, *Nielson v. Private Fuel Storage, LLC* (No. 04-575) (Nov. 2005), App.316a. The United States reasoned that "there is no basis for this Court to reconsider" its settled view "that 'part of the pre-empted field is defined by reference to the purpose of the state law.'" *Id.* (quoting *English*, 496 U.S. at 84). The Solicitor General specifically addressed the provisions of the Utah statute regulating the State's roads. Even though the AEA does not regulate the use of State highways, the Solicitor General agreed with the Tenth Circuit that the road provisions were preempted because the State "do[es] not dispute that the purpose of the[se] . . . provisions is to prevent the transportation and storage of SNF in Utah," and "the legislative history . . . confirms that they were based on health and safety concerns." *Id.* at 17, App.322a (quotation marks omitted). Accordingly, the Solicitor General advised that "[f]urther review is not warranted." *Id.* at 6, App.313a. The Court denied certiorari. 546 U.S. 1060 (2005).

The short of it is this: if the Fourth Circuit was correct to conclude, based on the text of the Commonwealth's ban, that Virginia is merely regulating uranium mining, then Utah was merely regulating roads and municipal services, and the Tenth Circuit was wrong to strike down its laws. But if the Tenth Circuit was right that the AEA preempted the challenged

Utah laws because they "targeted the transportation and storage of spent nuclear fuel," App.16a, then the Fourth Circuit was wrong to uphold the mining ban because it was conceded for purposes of the motion to dismiss before the court that the Virginia statute likewise targets uranium milling and tailings management. There is simply no daylight between the two cases.

C. The Decision Below Conflicts with the Second Circuit's Holding in *Entergy*.

The opinion below conflicts just as sharply with the Second Circuit's decision in *Entergy*. In that case, the Vermont Legislature had attempted to shut down a nuclear power plant by adopting a statute providing that "a nuclear energy generating plant may be operated in Vermont only with the explicit approval of the General Assembly." 733 F.3d at 403. Like the California moratorium at issue in *PG&E*, this statute on its face regulated only "the generation, sale, or transmission of electric power produced through the use of nuclear facilities," activities over which the AEA expressly preserves state authority. 42 U.S.C. § 2018.

Moreover, the Vermont Legislature included in its statute a declaration specifically stating that the Act's purpose was *not* grounded in radiological safety concerns, but rather was designed to foster a "larger societal discussion of broader economic and environmental issues relating to the operation of a nuclear facility in the state. . . ." *Entergy*, 733 F.3d at 403. Under *PG&E*,

all agree that a state law enacted for these non-radiological-safety reasons would not be preempted.

The Second Circuit, however, refused to defer to the statute's stated purpose:

> We do not blindly accept the articulated purpose of [a state statute] for preemption purposes. If that were the rule, legislatures could nullify nearly all unwanted federal legislation by simply publishing a legislative committee report articulating some state interest or policy – other than frustration of the federal objective – that would be tangentially furthered by the proposed state law.

Id. at 416 (brackets in original) (quotation marks omitted). Instead, *PG&E* "requires us to conduct a . . . searching review to determine whether a statute was enacted based upon radiological safety concerns," *id.*, a review that included scrutinizing "the statute's legislative history to determine if it was passed with an impermissible motive," *id.* at 418. After closely reviewing the available evidence of legislative motivation, which revealed that "both state legislators and regulators" had with "remarkable consistency . . . expressed concern about radiological safety and expressed a desire to evade federal preemption," the court concluded that "radiological safety [was] the Vermont legislature's primary purpose in enacting the statute." *Id.* at 420. Accordingly, it struck the statute down.

The decision below conflicts with *Entergy*'s analysis at every turn. Whereas the Second Circuit refused

to end its "inquiry . . . at the text of the statute" and "blindly accept [its] articulated purpose," *id.* at 416, the panel majority here would not "look past the statute's plain meaning to decipher" the legislature's genuine motivations, App.14a. Where *Entergy* conducted a "searching review to determine whether a statute was enacted based upon [impermissible] concerns," 733 F.3d at 416, the Fourth Circuit below "decline[d] to examine why the Commonwealth chose to ban uranium mining," reasoning that "this is not . . . a case" that requires "a more searching scrutiny of legislative intent," App.15a.[5]

II. Review Is Needed Because the Decision Below Threatens Critically Important Economic and National Security Interests.

"The stakes in this case are significant." App.21a (Traxler, J., dissenting). Uranium mined by Petitioners would be used to fuel the generators that produce one-fifth of our electricity, to power our military's nuclear submarines and aircraft carriers, and to maintain our arsenal of nuclear weapons. The decision below thus directly impedes both our Nation's effort to achieve energy independence and our national security, and it threatens to upset the equilibrium that has developed

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[5] The decision below also conflicts with the approach adopted by the Ninth Circuit – and affirmed by this Court – in *PG&E* itself, which likewise held that the field preempted by the AEA is defined by the *purpose* of the state law in question. *Pacific Legal Found. v. State Energy Res. Conservation & Dev. Comm'n*, 659 F.2d 903, 922 (9th Cir. 1981), *aff'd*, *PG&E*, 461 U.S. 190 (1983).

in the lower courts over the appropriate allocation of authority over atomic energy more broadly. An issue of such import must be settled by this Court.

1. At least since 1992, Congress has recognized "the national need to avoid dependence on imports" of uranium. 42 U.S.C. § 2296b-6(a). Accordingly, it has been the policy of the United States for the Government to take "a continuing responsibility for the domestic uranium industry to encourage the use of domestic uranium." 42 U.S.C. § 2296b-3(a). The Secretary of Energy is required to "report annually" to Congress "on action taken with respect to the domestic uranium industry," to "encourage States and utility regulatory authorities to take into consideration" the national interest in a healthy domestic uranium industry, and to annually "report to the Congress on the progress of the Secretary in encouraging actions by State regulatory authorities" in furtherance of this interest. *Id.* §§ 2296b-3(a), 2296b-6(a)-(b).

The United States has repeatedly reiterated the vital importance of the domestic uranium industry to the Nation's energy policy. For instance, a 2011 report by the Government Accountability Office emphasized that "[a] healthy and reliable domestic uranium industry is considered essential to ensuring that nuclear power remains a viable option for supplying the nation's energy needs." App.366a-67a. And the Department of Energy has likewise reaffirmed its "commit[ment] to the maintenance of a strong domestic uranium industry." App.357a. By blocking the development of the largest natural deposit of uranium in

the United States, the opinion below seriously impedes these goals.

The decision of the Fourth Circuit also threatens serious harm to our national security by completely foreclosing access to the largest uranium deposit in the United States. As noted above, the United States must currently rely upon imports for 94 percent of the uranium it consumes, much of which comes from Russia and its client states. App.352a, 353a. Numerous members of Congress have repeatedly stressed that establishing a domestic source of uranium – and curbing our reliance on Russian-controlled sources – is a critical national security imperative. *See* App.381a (Statement of Sen. Portman) ("being reliant on foreign countries including Russia for uranium" is "a national security issue"); App.383a (Statement of Sen. Barrasso) (indicating that "domestic uranium production is preferable to being dependent on importing foreign uranium from countries like Russia"); App.387a (Statement of Sen. Cassidy) ("national security issues at stake"); App.390a (letter from Rep. Ros-Lehtinen, Rep. Bachus, Rep. King, and Rep. McKeon) (Russian control over uranium supply "could threaten to impair the national security of the United States").

2. The Solicitor General has emphasized to this Court the critical importance of the domestic uranium industry to the United States' economic and national security interests. In urging the Court to review a Federal Circuit decision in favor of foreign uranium distributors in an anti-dumping case, the Solicitor General represented that a reliable domestic uranium

supply was "a matter of compelling importance to U.S. national security interests," since uranium is "used to fuel the government-owned nuclear reactors that produce tritium, a radioactive isotope necessary to maintain the U.S. nuclear arsenal," and – once further enriched – is also used to fuel "the U.S. Navy's nuclear-powered submarines and aircraft carriers." Petition for Writ of Certiorari at 30, *United States v. Eurodif, S.A.*, No. 07-1059 (Feb. 2008), App.347a-48a. Moreover, weakening the domestic uranium industry also "threatens to increase the United States' dependence on foreign energy sources." *Id.* at 31, App.349a. The Court granted certiorari and ultimately reversed the Federal Circuit's ruling in favor of the foreign uranium distributors. *United States v. Eurodif S.A.*, 555 U.S. 305, 322 (2009). It should grant review here, too, for the stakes are no less important.

3. Finally, while the impact of this case on the supply of domestic uranium is alone significant enough to warrant this Court's review, the consequences of the decision below are likely to affect the entire nuclear industry. The approach to AEA preemption adopted by the majority would allow state and local governments to second-guess the NRC's judgments on a broad range of issues related to atomic energy and radiological safety that Congress has committed to its regulatory authority.

Section 2021(k), as interpreted by this Court in *PG&E*, governs the allocation of federal and state authority not only over the uranium industry, but also over every other matter within the NRC's regulatory

ambit – including the construction and operation of nuclear power plants, 42 U.S.C. § 2133, the storage of spent nuclear fuel, *id.* §§ 2073, 2092, 2093, 2111, 2201(b), and the conduct of scientific and medical research into atomic energy and materials, 42 U.S.C. §§ 2051, 2053. This case is not the first – nor is it likely to be the last – in which state or local governments, based on localist concerns or alarmism, seek to frustrate or ban these activities, contrary to the national interest.

Since this Court's decision in *PG&E*, the lower courts have developed an approach to preemption – exemplified by the decisions in *Skull Valley* and *Entergy* – that largely protects the national interest, as superintended by the NRC, against localist interference. *See, e.g.*, *Entergy*, 733 F.3d 393; *Skull Valley*, 376 F.3d 1223; *Missouri v. Westinghouse Elec., LLC*, 487 F. Supp. 2d 1076, 1085-86, 1088 (E.D. Mo. 2007) (consent decree attempting to regulate the radiological safety of nuclear-site decommissioning preempted); *Abraham v. Hodges*, 255 F. Supp. 2d 539, 553 (D.S.C. 2002) (state executive order "prohibiting the transportation of plutonium within South Carolina" preempted); *Northern States Power Co. v. Prairie Island Mdewakanton Sioux Indian Cmty.*, 781 F. Supp. 612, 613 (D. Minn. 1991), *aff'd*, 991 F.2d 458 (8th Cir. 1993) (striking down tribal ordinance regulating the transportation of "various radioactive materials necessary to [a nuclear] power plant's operation to and from the plant"); *United Nuclear Corp. v. Cannon*, 553 F. Supp. 1220, 1224, 1230-32 (D.R.I. 1982) (invalidating state's attempt to impose $10 million

bond requirement on company engaged in radioactive site decommissioning).

The panel majority's ruling upends this equilibrium. Under the approach adopted below, a state or city may freely override the better judgment of the NRC concerning the radiological safety of any activity Congress has authorized that agency to regulate exclusively merely by pretextually regulating a related activity that is facially within the local government's jurisdiction. So long as such a law "does not purport to regulate an activity within the [AEA]'s reach," the Fourth Circuit's holding bars courts from "conduct[ing] a pretext analysis to ascertain [the] legislature's true motive." App.15a, 18a; *but see Skull Valley*, 376 F.3d at 1253. Under the approach adopted below, courts may not "look past the statute's plain meaning to decipher whether the legislature was motivated" by radiological safety concerns. App.14a; *but see Entergy*, 733 F.3d at 416. But Congress has entrusted the NRC alone to make the expert judgments necessary to balance the twin national interests in utilizing atomic energy to advance vital national security and energy policies while at the same time ensuring the "protect[ion of] the health and safety of the public." 42 U.S.C. § 2012(e).

CONCLUSION

For the reasons set forth above, the Court should grant the petition for writ of certiorari.

April 21, 2017

Respectfully submitted,

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PUBLISHED

UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT

No. 16-1005

VIRGINIA URANIUM, INC.; COLES HILL, LLC;
BOWEN MINERALS, LLC;
VIRGINIA ENERGY RESOURCES, INC.,

Plaintiffs-Appellants,

v.

JOHN WARREN, in his official capacity as Director of the Virginia Department of Mines, Minerals and Energy; BRADLEY C. LAMBERT, in his official capacity as Deputy Director of the Virginia Department of Mines, Minerals and Energy; JAMES P. SKORUPA, in his official capacity as Director of the Virginia Department of Mines, Minerals and Energy's Division of Mineral Mining,

Defendants-Appellees,

and

TERRY MCAULIFFE, in his official capacity as Governor of Virginia; MAURICE JONES, in his official capacity as Virginia Secretary of Commerce and Trade; MOLLY J. WARD, in her official capacity as Virginia Secretary of Natural Resources; DAVID K. PAYLOR, in his official capacity as Director of the Virginia Department of Environmental Quality; ROBERT J. WELD, in his official capacity as Regional Director of the Department of Environmental Quality's Blue

Ridge Regional Office; MICHAEL DOWD, in his official capacity as Director of the Virginia Department of Environmental Quality's Air Division; MELANIE D. DAVENPORT, in her official capacity as Director of the Virginia Department of Environmental Quality's Water Permitting Division; JUSTIN WILLIAMS, in his official capacity as Director of the Virginia Department of Environmental Quality's Division of Land Protection and Revitalization,

Defendants.

THE NUCLEAR ENERGY INSTITUTE,

Amicus Curiae,

ROANOKE RIVER BASIN ASSOCIATION;
DAN RIVER BASIN ASSOCIATION,

Amici Supporting Appellees.

Appeal from the United States District Court for the Western District of Virginia, at Danville. Jackson L. Kiser, Senior District Judge. (4:15-cv-00031-JLK-RSB)

Argued: October 28, 2016 Decided: February 17, 2017

Before TRAXLER, DIAZ, and HARRIS, Circuit Judges.

Affirmed by published opinion. Judge Diaz wrote the majority opinion, in which Judge Harris joined. Judge Traxler wrote a dissenting opinion.

ARGUED: Charles J. Cooper, COOPER & KIRK, PLLC, Washington, D.C., for Appellants. Stuart Alan Raphael, OFFICE OF THE ATTORNEY GENERAL OF VIRGINIA, Richmond, Virginia, for Appellees. **ON BRIEF:** Michael W. Kirk, John D. Ohlendorf, COOPER & KIRK, PLLC, Washington, D.C., for Appellants. Mark R. Herring, Attorney General of Virginia, Rhodes B. Ritenour, Deputy Attorney General, Jonathan Duncan Pitchford, Assistant Attorney General, Matthew R. McGuire, Assistant Attorney General, Trevor S. Cox, Deputy Solicitor General, OFFICE OF THE ATTORNEY GENERAL OF VIRGINIA, Richmond, Virginia, for Appellees. William C. Cleveland, Caleb A. Jaffe, SOUTHERN ENVIRONMENTAL LAW CENTER, Charlottesville, Virginia, for Amici Roanoke River Basin Association and Dan River Basin Association. Peter C. Meier, PAUL HASTINGS LLP, San Francisco, California; Ellen C. Ginsberg, Jonathan M. Rund, Anne W. Cottingham, NUCLEAR ENERGY INSTITUTE, Washington, D.C., for Amicus Nuclear Energy Institute.

DIAZ, Circuit Judge:

Virginia Uranium, Inc., Coles Hill, LLC, Bowen Minerals, LLC, and Virginia Energy Resources, Inc. (collectively "Virginia Uranium") appeal the district

court's dismissal of their complaint for failure to state a claim upon which relief can be granted. Because we agree with the district court that federal law does not preempt state regulation of conventional uranium mining, we affirm.

I.

A.

The federal Atomic Energy Act ("AEA" or "Act") regulates several aspects of nuclear power generation in the United States, including "source material" such as uranium. 42 U.S.C. §§ 2011, 2014(z). The Nuclear Regulatory Commission ("NRC") enforces the provisions of the Act. *Id.* §§ 2201, 5801, 5841.

Uranium is the predominant source of fuel for nuclear power plants and fissile material for nuclear warheads. Uranium ore can be recovered from a deposit either through in situ leaching or by conventional mining such as an open-pit or underground mine.[1]

Once removed from the ground, uranium ore is milled into a refined product called "yellowcake." Yellowcake can be used to make nuclear fuel, but the remaining unused material – known as "tailings" – is radioactive and must be stored securely.

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[1] In situ leaching is a process by which chemicals are pumped through drilled wells into uranium deposits, altering the ore and pumping a uranium solution back to the surface.

B.

In the early 1980s, a uranium deposit was discovered in Pittsylvania County, Virginia on land owned by Coles Hill, LLC and Bowen Minerals, LLC. Containing 119 million pounds of uranium ore, the Coles Hill deposit was then (and remains) the largest known uranium deposit in the United States.

The Virginia General Assembly reacted to this discovery by calling for the state Coal and Energy Commission to "evaluate the environmental effects . . . and any possible detriments to the health, safety, and welfare of Virginia citizens which may result from uranium exploration, mining or milling." 1981 Va. Acts 1404. Before the Commission completed its report, however, the General Assembly imposed a moratorium (or "ban") on uranium mining "until a program for permitting uranium mining is established by statute." Va. Code Ann. § 45.1-283.

The Commission ultimately reported to the Governor and General Assembly in 1985 that the state could lift "the moratorium on uranium development" if it followed "essential specific recommendations . . . of the task force" and enacted laws to tightly regulate the industry. J.A. 534-38. The recommendations included limiting public exposure to radiation, issuing mill and tailings licenses in cooperation with the NRC, and regulating hazardous waste. The benefits of uranium mining in Virginia, the Commission found, "outweighed the costs 26 to 1." J.A. 543. Despite the Commission's

recommendation, the General Assembly did not move to lift the moratorium.

In January 2013, Virginia State Senators John Watkins and Richard Saslaw sponsored a bill to create a licensing scheme for the issuance of uranium mining permits. The bill was never voted on, and was later withdrawn. To date, no such program has been established, and the ban remains in effect.

Stymied in its efforts to mine the Coles Hill deposit, Virginia Uranium brought suit in the United States District Court for the Western District of Virginia, asking the court to declare the ban preempted by federal law and issue an injunction compelling the Commonwealth to grant uranium mining permits.

The Defendant Commonwealth of Virginia officials (collectively the "Commonwealth") moved to dismiss the Plaintiffs' complaint, and Virginia Uranium moved for summary judgment. The district court granted the Commonwealth's motion and dismissed the complaint. The court found that federal law (specifically the Atomic Energy Act) "does not . . . regulate nonfederal uranium deposits or their conventional mining." *Virginia Uranium, Inc. v. McAuliffe*, 147 F. Supp. 3d 462, 471 (W.D. Va. 2015). Finding that the Act does not commit conventional uranium mining to the NRC's authority, the district court distinguished the instant case from Supreme Court precedent requiring states to have a non-safety rationale to regulate activities within the NRC's purview. The district court further held that Virginia's ban "does not obstruct the

realization of Congress' purposes and objectives behind the [Act]" because Congress "evinced no purpose or objective that nonfederal uranium deposits be conventionally mined." *Id.* at 477.

This appeal followed.

II.

We review de novo the district court's conclusion that the Atomic Energy Act does not preempt Virginia's ban on uranium mining. *Epps v. JP Morgan Chase Bank, N.A.*, 675 F.3d 315, 320 (4th Cir. 2012). State laws may be preempted by federal law under the Supremacy Clause, which provides that "[t]his Constitution, and the Laws of the United States which shall be made in Pursuance thereof . . . shall be the supreme Law of the Land; and the Judges in every State shall be bound thereby, any Thing in the Constitution or Laws of any State to the Contrary notwithstanding." U.S. Const. art. VI, cl. 2.

"[T]he first and fundamental question in any preemption analysis is whether Congress intended to displace state law. . . ." *Wardair Canada, Inc. v. Fla. Dep't of Revenue*, 477 U.S. 1, 6 (1986). Congressional intent to "supercede state law . . . may be found from a scheme of federal regulation so pervasive as to make reasonable the inference that Congress left no room to supplement it," otherwise known as "field" preemption. *Pacific Gas & Elec. Co. v. State Energy Resources Conservation & Dev. Comm'n*, 461 U.S. 190, 203-04 (1983) (internal quotation marks omitted). State law may also

be preempted as in "conflict" with federal law when it "stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress." *Id.* at 204 (citing *Hines v. Davidowitz*, 312 U.S. 52, 67 (1941)).

Virginia Uranium offers three reasons why the Atomic Energy Act preempts Virginia's ban on uranium mining. First, it urges that conventional uranium mining is an "activity" under Section 2021(k) of the Act and that the Commonwealth therefore may not regulate it out of concern for radiological safety. Second, it contends that even if uranium mining is not a regulated "activity" under the Act, uranium-ore milling and tailings storage are regulated activities, and because the Virginia legislature intended to and does regulate those activities, the ban is therefore preempted. Finally, Virginia Uranium says that the ban is preempted because it's an obstacle to the full implementation of the Act's objectives. We address these arguments in turn.

A.

We begin with Virginia Uranium's claim that conventional uranium mining is an "activity" under Section 2021(k) of the Atomic Energy Act, which in turn means that states can't regulate such mining for the purpose of protecting against radiation hazards. Section 2021 of the Act, entitled "Cooperation with States," outlines "the respective responsibilities . . . of the States and the [Nuclear Regulatory] Commission with

respect to the regulation of byproduct, source, and special nuclear materials." 42 U.S.C. § 2021(a). Subsection (k) reserves to the states the right to "regulate activities for purposes other than protection against radiation hazards." *Id.* § 2021(k).

In *Pacific Gas*, the Supreme Court interpreted this provision as establishing the bounds of the Act's preemptive reach. Specifically, the Court instructed that "the test of pre-emption is whether the matter on which the state asserts the right to act is in any way regulated by the federal government." *Pacific Gas*, 461 U.S. at 213 (internal citations omitted). If a state purports to regulate an activity that is also regulated by the Act, a court must "determine whether there is a non-safety rationale" for the state rule. *Id.* If there is not, then the state law is preempted.

The Court in *Pacific Gas* addressed California regulations imposing conditions on the construction of new nuclear power plants in the state. Utilities seeking to construct nuclear plants in California had to obtain permission from the State Energy Resources and Conservation Commission. *Id.* at 197. But the Commission would only grant a permit to build if it determined that there was "adequate capacity" for storage of spent fuel rods and that the utility would provide "continuous, on-site, full core reserve storage capacity." *Id.* at 197-98 (internal quotation marks omitted). In passing these regulations, the California legislature denied that they were "designed to provide protection against radiation hazards" but instead were "adopted because 'uncertainties in the nuclear fuel cycle [made] nuclear

power an uneconomical and uncertain source of energy.'" *Id.* at 199-200.

The California regulations, the Court held, fell "squarely within the prohibited field." *Id.* at 213.[2] After considering arguments for why the regulations might have been enacted for safety (as opposed to economic) reasons, the Court opted against "attempting to ascertain California's true motive" and instead "accept[ed] California's avowed economic purpose." *Id.* at 216. Because the regulations had a non-safety rationale, the Atomic Energy Act did not preempt them. *Id.*

Here, the Commonwealth concedes that it lacks a non-safety rationale for banning uranium mining but says that Section 2021(k) does not apply to the ban because conventional uranium mining isn't an activity regulated by the NRC. To test this contention, we assess whether the term "activities" within Section 2021(k) of the Act encompasses all activities states may regulate or merely, as the Commonwealth contends, "activities regulated by the [Nuclear Regulatory] Commission." Appellees' Br. at 35.

The Supreme Court addressed this precise question in *Pacific Gas* and sided with the limited reading of Section 2021(k) pressed by the Commonwealth here. As we noted earlier, there, the Court explained that

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[2] As the district court in the instant case noted when discussing *Pacific Gas*, the construction of a nuclear power plant is an activity "clearly committed to the NRC's regulatory authority." *Virginia Uranium*, 147 F. Supp. 3d at 476 (citing 42 U.S.C. § 2021(c)(1)).

"the federal government has occupied the entire field of nuclear safety concerns," but the bounds of that field are measured by looking to whether "the matter on which the state asserts the right to act is in any way regulated by the federal government." *Pacific Gas*, 461 U.S. at 212-13 (internal citations omitted); *see also id.* at 209-10 ("[S]ection [2021] was not intended to cutback on pre-existing state authority outside the NRC's jurisdiction."). Section 2021(k) therefore prohibits states from regulating, for safety reasons, activities that are "in any way regulated" by the federal government under the Atomic Energy Act. We agree with the district court that conventional uranium mining is not such an activity.

The Act explicitly grants the NRC authority to regulate uranium mining on federal lands, but it says nothing about the Commission's power to regulate conventional uranium mining elsewhere. 42 U.S.C. § 2097. Section 2092 of the Act requires individuals to obtain an NRC license to "transfer, deliver, [or] receive possession of . . . any source material *after removal from its place of deposit in nature*." 42 U.S.C. § 2092 (emphasis added). Importantly, the NRC reads this provision as "precluding [Commission] jurisdiction over uranium mining." *In re. Hydro Resources, Inc.*, 63 N.R.C. 510, 512-13 (2006). Similarly, the NRC justifies regulating in situ mining by describing the method as "processing" uranium, over which the Commission has authority. *Id.*

When Congress has not "directly spoken to the precise question at issue," we defer to a federal

power an uneconomical and uncertain source of energy.'" *Id.* at 199-200.

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When Congress has not "directly spoken to the precise question at issue," we defer to a federal

agency's reasonable interpretation of a congressional act that the agency is charged with administering. *Nat'l Labor Relations Bd. v. Bluefield Hosp. Co.*, 821 F.3d 534, 542 (4th Cir. 2016) (citing *Chevron, U.S.A., Inc. v. Natural Res. Def. Council*, 467 U.S. 837, 842-44 (1984)). The Atomic Energy Act grants the NRC authority to enforce and promulgate rules under the Act. 42 U.S.C. § 2201. Federal law is silent on conventional uranium mining outside of federal lands, and the NRC reads this gap in the Act's language to mean that the Commission lacks the power to regulate it.

This interpretation is reasonable in the context of the Act. Congress explicitly gave the NRC power to regulate conventional uranium mining on federal lands and to govern what happens to source material "*after* its removal from its place of deposit in nature." *Id.* §§ 2902, 2907 (emphasis added). We think it logical to assume that, by expressly granting the NRC some authority over source material, Congress did not intend to implicitly grant broader authority. *See Barnhart v. Peabody Coal Co.*, 537 U.S. 149, 168 (2003) (explaining that the canon of *expressio unius est exclusio alterius* may apply where "it is fair to suppose that Congress considered the unnamed possibility and meant to say no to it").

Additionally, the power to regulate mining – including uranium mining – has traditionally been reserved to the states. *See In re Hydro Resources*, 63 N.R.C. at 513. We assume that is where it remains unless Congress evinces a "clear and manifest purpose" to supersede "the historic police powers of the States."

Wyeth v. Levine, 555 U.S. 555, 565 (2009) (quoting *Medtronic, Inc. v. Lohr*, 518 U.S. 470, 485 (1996)). Nothing in the AEA indicates that Congress meant for the NRC to displace the states in regulating conventional uranium mining – the Act is silent on the matter.

Indeed, accepting Virginia Uranium's more expansive reading of Section 2021(k)'s preemptive reach would mean that entities could mine free of government oversight. The states could not regulate and, on the NRC's (reasonable) view of the Act, it too would be a passive spectator. That cannot be the law. Rather, because conventional uranium mining outside of federal lands is beyond the regulatory ambit of the Nuclear Regulatory Commission, it is not an "activity" under Section 2021(k) of the Act. As a result, the district court was correct to hold that Virginia's ban on conventional uranium mining is not preempted.

B.

Virginia Uranium next contends that, even if conventional uranium mining is not an "activity" under Section 2021(k) of the Act, uranium-ore milling and tailings storage are such activities. Because the ban, according to Virginia Uranium, impermissibly attempts to regulate and has the effect of prohibiting those activities for nuclear safety reasons, it is preempted.

We agree that uranium milling and tailings storage are "activities" under Section 2021(k) because they are regulated by the NRC, and states may therefore

not regulate them except for purposes other than protection against radiation hazards. *See* 42 U.S.C. §§ 2021, 5842, 7918-19; 10 C.F.R. § 40.3; *see also* supra Part II.A. But the plain language of the Commonwealth's ban does not mention uranium milling or tailings storage. Va. Code Ann. § 45.1-283 ("[P]ermit applications for uranium mining shall not be accepted by any agency of the Commonwealth. . . .").

In the face of this telling omission, Virginia Uranium argues that no one "would *want* to undertake the pointless expense of constructing a mill and tailings-management complex in Virginia and transporting out-of-state uranium [ore] into the Commonwealth." Reply Br. at 20. Given this economic reality, Virginia Uranium urges us to look past the statute's plain meaning to decipher whether the legislature was motivated to pass the ban by a desire to regulate uranium milling or tailings storage. We decline the invitation.

In *Pacific Gas*, the Court warned against the "unsatisfactory venture" of "inquiry into legislative motive." 461 U.S. at 216 (citing *United States v. O'Brien*, 391 U.S. 367, 383 (1968)). The Court reasoned that, when dealing with provisions such as Section 2021(k) that allow states to enact laws for some purposes but not others, it is "pointless" for courts to invalidate statutes that may then be reenacted with a different motive. *Id.* Rather, "it should be up to Congress to determine whether a State has misused the authority left in its hands." *Id.* And even if motive inquiry were useful, the Court noted that legislative intent is often impossible to discern because "[w]hat motivates one

legislator to vote for a statute is not necessarily what motivates scores of others to enact it." *Id.*

There are some areas of law – such as actions arising under the Equal Protection Clause of the Fourteenth Amendment – where a legislature's improper motive *itself* is cause for courts to find a law unconstitutional. In those cases, we may conduct a pretext analysis to ascertain a legislature's true motive. *See, e.g. United States v. Windsor*, 133 S. Ct. 2675, 2693 (2013) (striking down an act of Congress because it was "motived by an improper animus"); *North Carolina State Conference of NAACP v. McCrory*, 831 F.3d 204, 220 (4th Cir. 2016) (A law is invalid under the Equal Protection Clause if a "discriminatory purpose was . . . a motivating factor" or if "the legislature enact[ed] a law 'because of,' and not 'in spite of,' its discriminatory effect." (internal citations omitted)). We do so in those contexts because a more searching scrutiny of legislative intent is needed in order to avoid the "circumventi[on] [of] a federally protected right." *Gomillion v. Lightfoot*, 364 U.S. 339, 347 (1960).

But this is not such a case. Because Virginia Uranium does not allege that the Virginia legislature acted with discriminatory intent, we adhere to the edict that courts "will not strike down an otherwise constitutional statute on the basis of an alleged illicit legislative motive," and we decline to examine why the Commonwealth chose to ban uranium mining, which it was plainly allowed to do. *O'Brien*, 391 U.S. at 383.

Virginia Uranium urges us to follow the paths forged by our sister circuits in *Skull Valley Band of Goshute Indians v. Nielson*, 376 F.3d 1223 (10th Cir. 2004), and *Entergy Nuclear Vermont Yankee, LLC v. Shumlin*, 733 F.3d 393 (2d Cir. 2013). While the courts there did strike down state laws as preempted under the AEA, the cases are distinguishable.

In *Skull Valley*, Plaintiffs challenged a host of Utah laws that, while facially within the state's police powers, surgically targeted the transportation and storage of spent nuclear fuel. 376 F.3d at 1228-30. Spent nuclear fuel storage, the Tenth Circuit found, is an activity regulated by the NRC. *Id.* at 1242. Moreover, unlike Virginia's ban on mining, all but two of the challenged Utah laws specifically mentioned this NRC-regulated activity. *Id.* at 1245-51, 1253-54.

One subset of changes to Utah's laws purported to focus solely on transportation by designating certain local roads near the site of a proposed spent nuclear fuel storage facility as "statewide public safety interest highways" and turning control over them to the state. *Id.* at 1251-52. But even this change in the law was packaged with two other transportation regulations targeting spent nuclear fuel directly. The first called for state resolution of "disputes arising out of the request to construct a railroad crossing made by an entity engaged in [spent nuclear fuel] storage and transportation," and the second required the "consent of the governor and the state legislature before the Department of Transportation [could] grant a right of

way to a company engaged in the transportation or storage of [spent nuclear fuel]." *Id.*

Not surprisingly, the Tenth Circuit felt no need to engage in the sort of pretext analysis that Virginia Uranium presses here to hold that Utah was purporting to govern an NRC-regulated activity. Indeed, the Commonwealth's two-sentence moratorium on uranium mining (an activity not regulated by the NRC) pales in comparison to Utah's comprehensive scheme intended to keep spent nuclear fuel out of the state by any means.

The Second Circuit's decision in *Entergy*, on the other hand, is a straightforward application of *Pacific Gas*. Vermont law required the "explicit approval of the General Assembly" in order to operate a nuclear energy plant within the state. *Entergy*, 733 F.3d at 403. The Second Circuit sought to determine the Vermont legislature's intent only after holding that the challenged law regulated an "activity" – the operation of nuclear power plants – within the meaning of Section 2021(k) of the Atomic Energy Act. *Id.* at 415. Applying *Pacific Gas*, it was then the court's duty to determine whether the state was "impermissibl[y] motiv[ated]" by nuclear safety concerns. *Id.* at 418-19.

The Second Circuit held that "the Vermont Legislature was improperly motivated by concerns relating to radiological safety in enacting" the challenged law, and therefore, the statute was "preempted on its face by the Atomic Energy Act." *Id.* at 422. In contrast, the

Commonwealth's mining ban does not purport to regulate an activity within the Act's reach, and thus we need proceed no further.

C.

Finally, Virginia Uranium contends that the Commonwealth's ban on conventional mining is preempted as an obstacle to the full implementation of the objectives of the Atomic Energy Act. We will find state laws preempted as in conflict with federal law if the state law "stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress." *Hines v. Davidowitz*, 312 U.S. 52, 67 (1941). But we do not easily find preemption; rather we start with "the assumption that the historic police powers of the States [are not] superseded by [Federal law] unless that was the clear and manifest purpose of Congress." *Wyeth*, 555 U.S. at 565 (quoting *Medtronic*, 518 U.S. at 485).

Determining whether a state law "stands as an obstacle" to federal law is a two-step process. First, we determine Congress's "significant objective[s]" in passing the federal law. *Williamson v. Mazda Motor of America, Inc.*, 562 U.S. 323, 330 (2011). We then turn to whether the state law stands "as an obstacle to the accomplishment of a significant federal regulatory objective." *Id.* (internal citations omitted).

Here, the parties do not dispute the Atomic Energy Act's stated purpose of promoting the safe development and use of atomic energy. 42 U.S.C. § 2012; *see*

also Pacific Gas, 461 U.S. at 221 ("There is little doubt that a primary purpose of the [Act] was, and continues to be, the promotion of nuclear power."). Virginia Uranium claims that the Commonwealth has created an obstacle to that Congressional purpose by banning uranium mining outright. It asks us to "imagine what would become of Congress's desire to encourage the development and use of uranium if *all 50 states* enacted similar legislation." Appellants' Br. at 56.

In fact, this hypothetical nationwide web of mining bans would have little effect. Why? For starters, over ninety percent of the uranium used by the country's atomic-energy industry is imported, so state bans on domestic production would have negligible effect. Moreover, as of 2015, eighteen domestic uranium recovery facilities – those that either use in situ leaching or are located on federal lands – are licensed by the NRC and thus beyond the reach of any state bans. Finally, if push comes to shove, the Atomic Energy Act allows the federal government to forcibly expand the production of domestic source material: The NRC may "purchase, condemn, or otherwise acquire . . . real property containing deposits of source material." 42 U.S.C. § 2096. In sum, Congress's purposes and objectives in passing the Act are not materially affected by the Commonwealth's ban on conventional uranium mining. The district court properly dismissed this case.

III.

For the reasons given, we affirm the district court's judgment.

AFFIRMED

TRAXLER, Circuit Judge, dissenting:

At issue in this case is Virginia's right to ban the mining of uranium because of radiological safety concerns regarding uranium milling and tailings management. While Virginia's apprehension is certainly understandable, in my view Congress has taken away a state's ability to limit mining for this particular reason.

Under the federal Atomic Energy Act of 1954 (the "Act" or the "AEA"), *see* 42 U.S.C. § 2011 *et seq.*, as amended, the federal government assumed responsibility for establishing a regime to make the development of nuclear energy safe enough that the powerful forces of the private sector could be unleashed to develop that energy to the maximum extent possible. The Supreme Court in *Pacific Gas* held that Congress intended that the federal government would *exclusively* occupy the field of radiological safety concerns regarding the activities the Act regulates and, indeed, that this exclusivity is central to the Act's objectives. If Virginia sought to limit the occurrence of AEA-regulated activities based on its own radiological safety concerns – and Virginia has not disputed that it did – that action

represents a clear encroachment into the preempted field.

Virginia's foray into this prohibited field would also thwart the Act's objectives. The AEA allows states to assume limited aspects of the authority of the Nuclear Regulatory Commission ("NRC"), but only if the NRC has approved the state's regulatory program, and Virginia has not obtained any authority to regulate uranium mining or tailings management. By refusing to respect the regulatory regime the NRC established regarding these activities, and by instead unilaterally attempting, based on its own safety concerns, to prevent the occurrence of these very activities that Congress was attempting to support, Virginia has frustrated Congress's objectives.

For both of these reasons, I believe that the district court erred in dismissing this action, and I respectfully dissent from the majority's contrary disposition.

I.

A.[1]

The stakes in this case are significant. Uranium is the predominant fuel source for nuclear power plants, which, in 2015, produced approximately 20% of our country's electricity. *See U.S. Energy Information Administration/Frequently Asked Questions*, https://www.

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[1] On review of the grant of a motion by the defendants to dismiss for failure to state a claim, we view the allegations in the complaint in the light most favorable to the plaintiffs.

eia.gov/tools/faqs/faq.cfm?id=427&t=3 (last visited, Jan. 20, 2017) (saved as ECF opinion attachment). In 2015, approximately 94% of the uranium used in those plants was imported. *See U.S. Energy Information Administration/Nuclear & Uranium/Uranium Marketing Annual Report*, http://www.eia.gov/uranium/marketing (last visited, Jan. 20, 2017) (saved as ECF opinion attachment). Uranium is also the fissile material used for nuclear warheads.

The Coles Hill uranium deposit is the largest natural deposit of uranium in the United States and one of the largest in the world. The deposit, discovered in the early 1980s, includes approximately 119 million pounds of uranium ore, worth between $5 and $6 billion. Coles Hill, LLC, and Bowen Minerals, LLC, own the land above the deposit. Although they retain a royalty interest, they lease the mineral estate to Virginia Uranium, which is owned by Virginia Energy Resources.

In light of the Coles Hill deposit's geological properties, the uranium there would likely need to be extracted by conventional mining.[2] Once mined, the

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[2] In situ leaching is another method of extracting uranium from the ground. That process "involves leaving the ore where it is in the ground, and recovering the minerals from it by dissolving them and pumping the pregnant solution to the surface where the minerals can be recovered. Consequently there is little surface disturbance and no tailings or waste rock generated." *World Nuclear Association/Information Library/Nuclear Fuel Cycle/Mining of Uranium/In Situ Leach Mining of Uranium*, http://www.world-nuclear.org/information-library/nuclear-fuel-cycle/mining-of-uranium/in-situ-leach-mining-of-uranium.aspx (last visited Jan.

uranium would need to be milled into usable form. Typically, this occurs at the mining site. A mill grinds the ore into sand, which in turn is run through an acidic or alkaline solution to separate the uranium from the waste, or "tailings." The uranium is then concentrated and dried into "yellowcake," the final product that is commercially sold and shipped off-site for enrichment. Because the tailings continue to have most of their naturally occurring radioactivity, they would need to be stored securely in order to prevent any radioactive materials from escaping into the environment.

B.

The federal government first authorized civilian application of atomic power with the Atomic Energy Act of 1946 (the "1946 Act"). *See Pacific Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n* ("*Pacific Gas*"), 461 U.S. 190, 206 (1983). Under the 1946 Act, the federal government possessed a monopoly on nuclear technology. *See English v. General Elec. Co.*, 496 U.S. 72, 80 (1990).

20, 2017). Critically, however, for uranium to be obtained from the land by that method, "the orebody needs to be permeable to the liquids used, and located so that they do not contaminate groundwater away from the orebody." *Id.* And "[b]ecause of the geology in the Commonwealth of Virginia, it is very unlikely that [in situ recovery] can be used to extract uranium" from the Coles Hill deposit or anywhere else in Virginia. J.A. 209; *see* J.A. 230 (similar).

In 1954, the AEA replaced the 1946 Act and marked the beginning of private development of nuclear power. The AEA "stemmed from Congress' belief that the national interest would be served if the Government encouraged the private sector to develop atomic energy for peaceful purposes under a program of federal regulation and licensing." *Id.* at 81. Indeed, the Act itself states that its goal is "to encourage widespread participation in the development and utilization of atomic energy for peaceful purposes *to the maximum extent* consistent with the common defense and security and with the health and safety of the public." 42 U.S.C. § 2013(d) (emphasis added). To this end, the Act was designed "to insure that nuclear technology [would] be safe enough for [such] widespread development and use." *Pacific Gas*, 461 U.S. at 213.

Under the AEA, Congress gave the Atomic Energy Commission ("AEC") – now the NRC[3] – "exclusive authority to license the transfer, delivery, receipt, acquisition, possession, and use of all nuclear materials." *English*, 496 U.S. at 81. The Act specifically provides that anyone wishing to "transfer or receive in interstate commerce, manufacture, produce, transfer, acquire, own, possess, import, or export" any radioactive "byproduct material" – a term now defined to include

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[3] In 1974, Congress enacted the Energy Reorganization Act, which abolished the AEC and transferred its licensing and regulatory responsibilities to the NRC. *See Duke Power Co. v. Carolina Envtl. Study Grp., Inc.*, 438 U.S. 59, 63 n.1 (1978); 42 U.S.C. §§ 5801(c), 5814. This legislation "also expanded the number and range of safety responsibilities under the NRC's charge." *English v. General Elec. Co.*, 496 U.S. 72, 81 (1990).

"the tailings or wastes produced by the extraction or concentration of uranium" – is required to obtain a license from the NRC.[4] 42 U.S.C. §§ 2111(a), 2014(e)(2); *see* 42 U.S.C. § 2111(b). Pursuant to these statutes, the NRC has promulgated detailed regulations designed to ensure the radiological safety of uranium milling and tailings management.[5] *See* 10 C.F.R. Pt. 40, App. A.

In 1959, Congress amended the Act to allow states to assume limited aspects of the NRC's regulatory authority if certain conditions are satisfied. *See English*, 496 U.S. at 81. Specifically, the NRC may "enter into agreements with the Governor of any State" in order "to regulate the materials covered by th agreement for the protection of the public health and safety from radiation hazards." 42 U.S.C. §§ 2021(b). However, the NRC may enter into such an agreement only after ensuring that the state's program is "compatible" with

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[4] The Act's original language did not specifically include uranium tailings within the commission's licensable jurisdiction. However, the Uranium Mill Tailings Radiation Control Act of 1978 (the "UMTRCA") added uranium tailings to the definition of "byproduct material" in order to "clarif[y]" and "reinforce[]" the NRC's authority over operating mills' production and disposal of such tailings. H.R. Rep. No. 95-1480, at 13 (1978); *see* Pub. L. No. 95-604, 92 Stat. 3021.

[5] The Act did not seek to regulate conventional uranium mining on nonfederal lands, apparently because Congress did not perceive that the mining itself posed serious radiological risks and Congress recognized the necessity of encouraging independent prospecting. *See* S. Rep. No. 79-1211, at 18-19 (1946); *see also* Atomic Energy: Hearings Before the Committee on Military Affairs on H.R. 4280, 79th Cong. 125 (1945) (testimony that uranium is not dangerous "itself, without applying to it some industrial process").

the otherwise applicable federal regulations and "is adequate to protect the public health and safety with respect to the materials covered by the . . . agreement." 42 U.S.C. § 2021(d)(2).

In 2009, Virginia entered into a limited agreement with the NRC, under which Virginia would assume the authority to regulate the radiological hazards of "source material" – which includes uranium and uranium ore – and most byproduct material. 74 Fed. Reg. 14821, 14822-23 (Apr. 1, 2009). However, the agreement explicitly excluded uranium tailings. *See id.*; 42 U.S.C. § 2014(e)(2). Thus, the NRC retained exclusive authority to regulate the radiological dangers pertaining to uranium milling and tailings management.

C.

In 1982, soon after the discovery of the Coles Hill deposit, the Virginia legislature imposed an emergency moratorium on uranium mining and subsequently extended the emergency moratorium into an indefinite ban. *See* Va. Code § 45.1-283.[6] Although the ban nominally addresses uranium *mining*, in actuality, it was

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[6] Virginia requires anyone wishing to engage in mineral mining in the state to obtain a mining permit from the Department of Mines, Minerals and Energy. *See* Va. Code § 45.1-181. Additionally, to operate a mineral mine in Virginia, one must first obtain a Mine Safety permit. *See* Va. Code § 45.1-161.292:30. Virginia's initial, emergency moratorium prohibited any agency from accepting permit applications for uranium mining prior to July 1, 1983. *See* 1982 Va. Acts ch. 269. And, the extension continued that

concerns of the radiological safety of uranium *milling* and *tailings management* that motivated the legislature to act.[7] The legislature banned uranium mining only as a means to prevent milling and tailings management from occurring in Virginia.

The legislature considered lifting the ban between 2008 and 2013 but ultimately decided against doing so.

D.

Virginia Uranium, Inc., Coles Hill, LLC, Bowen Materials, LLC, and Virginia Energy Resources, Inc. (collectively, "Virginia Uranium") filed this suit for declaratory and injunctive relief against several governmental defendants (collectively, "the Commonwealth"). Virginia Uranium alleges that the AEA preempts Virginia's ban under two theories. First, it claims that, by enacting the AEA, Congress intended that the federal government would exclusively occupy the field of radiological safety concerns regarding the activities the AEA regulates. Virginia Uranium claims that the mining ban is grounded primarily in Virginia's radiological safety concerns regarding two such activities: the milling of the uranium that would be mined in Virginia if mining were permitted, and the storage of the tailings that would result. In light of this purpose of protecting

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restriction "until a program for permitting uranium mining is established by statute." 1983 Va. Acts ch. 3, Va. Code § 45.1-283. No such program has yet been established.

[7] The primary concern was that uranium tailings could contaminate the drinking water supply.

against the radiological dangers associated with these two AEA-regulated activities, Virginia Uranium maintains that Virginia's ban encroaches upon the very field that Congress intended the federal government to occupy exclusively.

Second, Virginia Uranium contends that the mining ban does not respect the balance Congress struck regarding the objectives of promoting uranium development and ensuring health, safety, and environmental protection. Virginia Uranium maintains that the Act contemplates that uranium development will not be barred on the basis of concerns regarding the radiological dangers of regulated activities, so long as the federal regulations applying to those activities are satisfied. Virginia Uranium alleges that Virginia's uranium mining ban effectively operates as a ban on storing uranium tailings even though Virginia does not have the federal government's permission to regulate that activity. Thus, Virginia Uranium claims that the ban is preempted as an obstacle to the full implementation of the Act's objectives.[8]

Virginia Uranium seeks a declaration that the AEA preempts Va. Code § 45.1-283. It also requests an injunction forbidding the Commonwealth from adhering to § 45.1-283 and requiring it to process permit applications for uranium mining. The Commonwealth

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[8] Virginia Uranium also alleges that it is "physically impossible to develop uranium in Virginia and simultaneously comply with both federal law, which regulates but allows the storing of uranium tailings, and Virginia's law, which effectively bans storing uranium tailings." J.A. 47.

moved to dismiss the complaint for failure to state a claim. *See* Fed. R. Civ. P. 12(b)(6). The Commonwealth did not then – and does not now – dispute Virginia Uranium's allegation that § 45.1-283 is actually grounded in the legislature's radiological safety concerns regarding uranium milling and uranium tailings management.[9] Nor has it ever disputed that uranium milling and tailings management are activities that the Act regulates. Nevertheless, it argued that because § 45.1-283 does not *directly prevent those activities* but only *directly* bans uranium *mining* – albeit as a means of preventing the AEA-regulated activities – the ban is not preempted.

Virginia Uranium opposed the Commonwealth's motion to dismiss and filed a cross-motion for summary judgment, attaching hundreds of pages of materials that Virginia Uranium maintained demonstrated, as a matter of law, that Virginia's ban on mining was a pretext for its true goal of preventing uranium milling and tailings management.

The district court granted the Commonwealth's motion, ruling that the ban is not preempted even assuming that the Virginia legislature's actual purpose

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[9] The Commonwealth acknowledges that it "conceded the truth of [Virginia Uranium's] claims about legislative motive . . . for purposes of their Rule 12(b)(6) motion." Appellees' brief at 15 n.58. It argues, however, that its concession did not extend beyond the motion to dismiss and that had that motion "not been granted, the district judge would have had discretion to give [the Commonwealth] 'an opportunity to properly . . . address the facts' asserted by [Virginia Uranium]." *Id.* (quoting Fed. R. Civ. P. 56(e)(1)).

was to protect against the radiological dangers associated with uranium milling and tailings management. *See Virginia Uranium, Inc. v. McAuliffe*, 147 F. Supp. 3d 462 (W.D. Va. 2015). The district court reasoned that because the AEA does not regulate conventional mining of uranium ore on nonfederal lands, Virginia was free to ban uranium ore mining *as a means of preventing* uranium milling and tailings management, in order to avoid the radiological dangers associated with those AEA-regulated activities. *See id.* at 471-77. Thus, the court concluded that the ban did not encroach upon the field reserved exclusively for the federal government. *See id.*

For similar reasons, the court also concluded that the ban was not preempted under the doctrine of conflict preemption because it did not frustrate "the accomplishment and execution of the full purposes and objectives of Congress" regarding the "promotion of nuclear power." *Id.* at 477 (internal quotation marks omitted). In this regard, the court reasoned primarily that the Act "evinced no purpose or objective that nonfederal uranium deposits should be conventionally mined."[10] *Id.* And the court suggested that the federal government was free to condemn the property if it wished to have the uranium therein conventionally

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[10] The court further concluded that the ban did not "conflict [] with Congress' judgment that [on-site milling and mill-tailings management] may proceed." *Virginia Uranium, Inc. v. McAuliffe*, 147 F. Supp. 3d 462, 477 (W.D. Va. 2015). The court also rejected Virginia Uranium's claim that it was impossible for Virginia Uranium to comply with both the AEA and the Virginia ban. *See id.* at 477 n.18.

mined. *See id.* at 477 n.20 The court also determined that Virginia did not circumvent the requirements Congress put in place for states to assume regulation of uranium milling and tailings management because Virginia's statute did not purport to regulate those activities. *See id.* at 472-73, 477 n.19.

Having decided to dismiss the action, the court denied as moot Virginia Uranium's summary judgment motion. *See id.* at 478.

II.

Virginia Uranium argues that the district court erred in dismissing its action. I agree.

A.

We review de novo the grant of a motion to dismiss for failure to state a claim. *See U.S. Airline Pilots Ass'n v. Awappa, LLC*, 615 F.3d 312, 317 (4th Cir. 2010). In so doing, "we must accept as true all of the factual allegations contained in the complaint." *Anderson v. Sara Lee Corp.*, 508 F.3d 181, 188 (4th Cir. 2007) (internal quotation marks omitted). To survive dismissal, the complaint must contain "enough facts to state a claim to relief that is plausible on its face." *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 570 (2007).

Under the Supremacy Clause, "the Laws of the United States . . . shall be the supreme Law of the Land . . . any Thing in the Constitution or Laws of any state to the Contrary notwithstanding." U.S. Const. art.

VI., cl. 2. Accordingly, "Congress may . . . pre-empt, *i.e.*, invalidate, a state law through federal legislation." *Oneok, Inc. v. Learjet, Inc.*, 135 S. Ct. 1591, 1595 (2015). It may do so by express statutory language, or it may do so implicitly, "either through 'field' pre-emption or 'conflict' pre-emption." *Id.* Congress engages in field preemption when it has intended "to foreclose any state regulation in the *area*," regardless of any inconsistency between the state regulation and federal standards. *Arizona v. United States*, 132 S. Ct. 2492, 2502 (2012). Conflict preemption occurs when "compliance with both federal and state regulations is a physical impossibility," *Florida Lime & Avocado Growers, Inc. v. Paul*, 373 U.S. 132, 142-43 (1963), or when state law "stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress." *Hines v. Davidowitz*, 312 U.S. 52, 67 (1941).

B.

The Supreme Court in *Pacific Gas* established the legal analysis that governs this appeal, and I believe it is important to review the Court's reasoning in some detail. In *Pacific Gas*, the Court considered whether the AEA preempted a California statute imposing a moratorium on nuclear plant construction in California until a state commission found that adequate facilities and means of disposal of spent nuclear fuel were available. *See Pacific Gas*, 461 U.S. at 198. The plaintiffs ("the Utilities") maintained that the moratorium was enacted based on the California legislature's safety concerns regarding the radiological dangers of

operating nuclear reactors in the absence of any strategy for the long-term storage of spent nuclear fuel. *See id.* at 196-97, 204. They advanced three arguments that the moratorium was preempted: First, because the moratorium was grounded in nuclear safety concerns it fell within an exclusively federal field; second, the moratorium and the judgments underlying it conflicted with the decisions that Congress and the NRC had made regarding nuclear waste disposal; and third, the moratorium "frustrate[d] the federal goal of developing nuclear technology as a source of energy." *Id.* at 204.

The Court began its preemption analysis by observing that the Act did not "expressly require the States to construct or authorize nuclear power plants or prohibit the States from deciding, as an absolute or conditional matter, not to permit the construction of any further reactors." *Id.* at 205. The Court therefore turned to the question of field preemption and, specifically, the scope of the AEA's preempted field as it would relate to a state ban on construction of nuclear powerplants. The Court noted that the Utilities had maintained that Congress had intended to "preserve the federal government as the sole regulator of all matters nuclear." *Id.* The Court did not view the exclusive federal field as being quite that broad, however. Rather, the Court observed that Congress had intended roles for both the federal government and the states:

> Congress . . . intended that the federal government should regulate the radiological safety aspects involved in the construction

> and operation of a nuclear plant, but that the States [would] retain their traditional responsibility in the field of regulating electrical utilities for determining questions of need, reliability, cost and other related state concerns.

Id.

The Court then turned its focus to the challenged California statute. The Court noted initially that "the statute does not seek to regulate the construction or operation of a nuclear powerplant," which would have been clearly impermissible given that the Act specifically regulates the manner in which nuclear plants must be constructed and operated. *Id.* at 212; *see id.* (noting "the NRC's exclusive authority over plant construction and operation"). On the other hand, the Court rejected the argument of the defendants (collectively, "California") that "although safety regulation of nuclear plants by states is forbidden, a state may completely prohibit new construction until its safety concerns are satisfied by the federal government." *Id.* The Court reasoned that it is not the case that "[s]tate safety regulation is . . . preempted only when it conflicts with federal law. Rather, the federal government has occupied *the entire field of nuclear safety concerns*, except the limited powers expressly ceded to the states."[11] *Id.* (emphasis added); *see also* 42 U.S.C.

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[11] The Court reiterated this analysis in *English*. The lawsuit at issue there included a state-law cause of action for intentional infliction of emotional distress brought by an employee of a nuclear-fuels production facility against her employer. *See English*,

§ 2021(k) ("Nothing in this section shall be construed to affect the authority of any State or local agency to regulate activities for purposes other than protection against radiation hazards.").

In light of the Court's conclusions regarding the scope of the preempted field, the Court reasoned that "[a] state moratorium on nuclear construction grounded in safety concerns [would] fall[] squarely within" it. *Pacific Gas*, 461 U.S. at 213. The Court added that a statute based on such concerns would also be preempted for the two other reasons the Utilities advanced. First, "a state judgment that nuclear power is not safe enough to be further developed would conflict directly with the countervailing judgment of the

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496 U.S. at 77-78. The employee's claim arose out of actions her employer allegedly took against her in retaliation for her nuclear-safety complaints. *See id.* at 76. The Court considered whether the AEA preempted the employee's state-law cause of action under the doctrine of field preemption. *See id.* at 80-86. The *English* Court explained that the *Pacific Gas* Court had defined "part of the pre-empted field . . . by reference to the purpose of the state law." *Id.* at 84. The Court concluded that because "the state tort law at issue . . . [was] not motivated by safety concerns," the portion of the preempted field defined by statutory purpose was "not relevant." *Id.* Nevertheless, the *English* Court also concluded that a *separate* part of the preempted field consisted of laws that "have some direct and substantial effect on the decisions made by those who build or operate nuclear facilities concerning radiological safety levels." *Id.* at 85. In the end, the Court determined that the effect of the state claim on the nuclear safety "decisions made by those who build or operate nuclear facilities" was "neither direct nor substantial enough to place petitioner's claim" in that part of the preempted field either. *Id.*

NRC, that nuclear construction may proceed notwithstanding extant uncertainties as to waste disposal." *Id.* (citation omitted). And second, "[a] state prohibition on nuclear construction for safety reasons" would be preempted because it would "be in the teeth of the [Act's] objective to insure that nuclear technology be safe enough for widespread development and use." *Id.*

Even though the text of the moratorium itself did not demonstrate that the statute was preempted, given the Court's conclusion that a prohibition on the construction of nuclear powerplants would be preempted if grounded in nuclear safety concerns, the Court decided that "it [wa]s necessary to determine whether there [was] a non-safety rationale for [the statute]." *Id.*

Turning to that question, the Court noted that "California has maintained . . . that [its moratorium] was aimed at economic problems, not radiation hazards." *Id.* And the Court discussed legislative history supporting California's claim. *See id.* at 213-14. The Supreme Court observed that the Ninth Circuit, relying on this legislative history, had determined that the California legislature was indeed motivated by economic considerations rather than safety concerns. *See id.* at 214. And, the Court noted that its "general practice is to place considerable confidence in the interpretations of state law reached by the federal courts of appeals." *Id.* (citing *Mills v. Rogers*, 457 U.S. 291, 306 (1982), and *Bishop v. Wood*, 426 U.S. 341, 346 (1976)).

The Court then proceeded to discuss four considerations that the Utilities and *amici* had identified as

indicia that the Ninth Circuit's determination was incorrect and that the California legislature had actually been motivated by safety concerns. *See id.* at 214-16. Although the Court downplayed the persuasiveness of each of the four, it nonetheless acknowledged that they were "subject to varying interpretation." *Id.* at 216. Nevertheless, in addition to the inconclusiveness of these indicia, the Court identified two other reasons why it would accept the Ninth Circuit's determination regarding the California legislature's motivation rather than "becom[ing] embroiled" itself in the inquiry. *Id.* The Court noted first that "inquiry into legislative motive is often an unsatisfactory venture" considering that individual legislators do not necessarily all have the same motivation for voting to enact particular legislation. *Id.* And the Court noted as well that second-guessing the Ninth Circuit's inquiry into whether California was motivated by safety concerns "would be particularly pointless" considering that Congress specifically allowed the states to decide against constructing new nuclear powerplants for economic reasons. *See id.* The Court observed that states inclined not to allow new nuclear powerplants could easily disallow plants on that basis and that Congress would be free to revoke this authority if it decided that states were abusing it by offering perpetual economic considerations as the reason for restrictions that are actually grounded in safety concerns. *See id.* The Court therefore accepted the Ninth Circuit's determination – and California's representation – that the state legislature had been motivated primarily by economic considerations rather than safety concerns. *See id.* Consequently, the

Court held that "the statute lies outside the occupied field of nuclear safety regulation." *Id.*

The Court then turned to the Utilities' other two preemption arguments. The Court concluded that there was no conflict between the California legislature's judgment, for economic reasons, that nuclear plants should not be built because "[t]he NRC's imprimatur . . . indicates only that it is safe to proceed with such plants, not that it is economically wise to do so." *Id.* at 218.

Regarding the argument that the moratorium frustrated the "Act's purpose to develop the commercial use of nuclear power," *id.* at 220, the Court acknowledged that "the promotion of nuclear power" was indeed "a primary purpose" of the Act. *Id.* at 221. However, the Court also recognized that the Act was not designed to "promot[e] . . . nuclear power . . . 'at all costs.'" *Id.* at 222. Rather, "the legal reality remains that Congress . . . left sufficient authority in the states to allow the development of nuclear power to be slowed or even stopped *for economic reasons*." *Id.* at 223 (emphasis added). Because the Court had accepted the Ninth Circuit's determination that California's moratorium was in fact enacted for economic reasons rather than reasons of safety, the Court concluded that the moratorium did not frustrate the Act's purposes and thus was not preempted for that reason either. *See id.*

C.

The analysis in *Pacific Gas* demonstrates, both for reasons of field preemption and conflict preemption, that the district court erred in dismissing Virginia Uranium's action.

1. Field Preemption

I begin with field preemption. Just as was true of California's moratorium in *Pacific Gas*, *see* 461 U.S. at 212, the *substance* of Virginia's law – a ban on conventional uranium mining – does not conflict with the Act, which does not regulate conventional mining on non-federal lands. Nevertheless, as *Pacific Gas* held, a statute's *purpose* can itself bring the statute within the prohibited field. *See Pacific Gas*, 461 U.S. at 213; *see also English*, 496 U.S. at 84 (noting that *Pacific Gas* defined "part of the preempted field . . . by reference to the purpose of the state law"); *North Carolina ex rel. Cooper v. TVA*, 615 F.3d 291, 303 (4th Cir. 2010) ("[T]he [*Pacific Gas*] Court explained that when Congress chose to give the [NRC] control over issues relating to nuclear safety, it completely occupied the field of nuclear safety regulations."); *cf. Oneok, Inc.*, 135 S. Ct. at 1599-1600 (holding that whether the Natural Gas Act (NGA) preempts a particular state law turns on "the *target* at which the state law *aims*"; rejecting the dissent's contention that that [sic] the Court should instead "focus . . . on '*what* the State seeks to regulate . . . , not *why* the State seeks to regulate it'" (emphasis in original)). Thus, as in *Pacific Gas*, "it is necessary to

determine whether there is a non-safety rationale" for the ban.[12] *Pacific Gas*, 461 U.S. at 213.

Unlike in *Pacific Gas*, wherein California claimed that the moratorium was actually grounded on a non-safety concern, *the Commonwealth makes no such claim here*. Rather, at this stage of the litigation, the Commonwealth *concedes* the truth of Virginia Uranium's allegation that the moratorium is grounded on the Virginia legislature's concerns regarding the radiological safety of uranium ore milling and tailings

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[12] Citing *English*, the Commonwealth asserted during oral argument that regardless of the *purpose* of a state statute, it falls in the preempted field only if its *effect* is sufficiently direct and substantial. But this argument plainly conflates the two *separate* parts of the preempted field that *English* described. *See English*, 496 U.S. at 84 ("[E]ven as the [*Pacific Gas*] Court suggested that *part* of the pre-empted field is defined by reference to the purpose of the state law in question, it made clear that *another part* of the field is defined by the state law's actual effect on nuclear safety." (emphasis added)). Under *Pacific Gas*, any state statute grounded in protecting citizens from the radiological dangers of activities regulated by the Act is preempted, regardless of the statute's effect.

The Commonwealth also relied at oral argument on *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238 (1984). In *Silkwood*, the Court considered, as is relevant here, "whether a state-authorized award of punitive damages arising out of the escape of plutonium from a federally licensed nuclear facility [was] preempted . . . because it" fell within the "forbidden field" of laws "regulating the safety aspects of nuclear energy." *Id.* at 240-41. The Court concluded that Congress had not intended that such state remedies would be preempted and that Congress had indeed "assumed that persons injured by nuclear accidents were free to utilize existing state tort law remedies." *Id.* at 252. Because *Silkwood* did not concern a law claimed to have been enacted to protect against radiological dangers, it is no help to the Commonwealth here.

storage. The Commonwealth also does not dispute that these two activities are regulated under the Act.[13] *See* 42 U.S.C. §§ 2014(e)(2), (z), 2092, 2111(a), 2114(a). Thus, under the reasoning of *Pacific Gas*, because the Virginia statute was grounded in nuclear safety concerns, it "falls squarely in the prohibited field," and is preempted for that reason.[14] *Pacific Gas*, 461 U.S. at 213.

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[13] The Commonwealth argues that legislation grounded in radiological safety concerns *regarding an activity that the Act does not regulate*, such as the taking of X-rays, would not be preempted. There is no reason to address that issue in this case, however, given that the activities that the Commonwealth concedes were the focus of the legislature's concern – uranium milling and tailings management – are regulated by the Act.

[14] The district court concluded, and the Commonwealth argues, that *Pacific Gas* is distinguishable from the present case because Virginia's ban concerns an activity the Act does not regulate – uranium mining – while the moratorium challenged in *Pacific Gas* "regulated an activity that [was] clearly committed to the NRC's regulatory authority." *Virginia Uranium, Inc.*, 147 F. Supp. 3d at 476. But the district court's conclusion that the California moratorium regulated an activity that the Act also regulated is directly at odds with the *Pacific Gas* Court's own view: *Pacific Gas* specifically explained that the California moratorium did "not seek to regulate the construction or operation of a nuclear powerplant." 461 U.S. at 212 (emphasis added).

The district court also described the relevant analysis in *Pacific Gas* as nonbinding dicta, *see Virginia Uranium*, 147 F. Supp. 3d at 476, a view that even the Commonwealth appropriately does not appear to embrace. "Dictum is statement in a judicial opinion that could have been deleted without seriously impairing the analytical foundations of the holding – that, being peripheral, may not have received the full and careful consideration of the court that uttered it." *Pittston Co. v. United States*, 199 F.3d 694, 703 (4th Cir. 1999) (internal quotation marks omitted). The analysis

Until today, each Court of Appeals addressing the issue since *Pacific Gas* has held that state statutes enacted to protect against the radiological dangers of activities the AEA regulates are preempted *regardless of whether the statutory text reveals that purpose and regardless of whether the statute expressly prohibits an activity the Act regulates.*[15]

In *Skull Valley Band of Goshute Indians v. Nielson*, 376 F.3d 1223 (10th Cir. 2004), for example, the Tenth Circuit considered whether the AEA preempted several Utah statutes. Most relevant here were statutes that took control of "the only road permitting

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leading up to, and including, the Court's conclusion that the California moratorium would be preempted if it were determined to be grounded on safety concerns is a central part of the Supreme Court's opinion. And even if it were dicta, which it is not, we would still be bound to follow it considering the obvious importance of the analysis to the opinion. *See United States v. Fareed*, 296 F.3d 243, 247 (4th Cir. 2002) (explaining that lower federal appellate courts are "bound by Supreme Court dicta almost as firmly as by the Court's outright holdings").

[15] Of course, the Ninth Circuit in *Pacific Gas* itself also recognized that the California moratorium before the court would be preempted if it were enacted for nuclear safety purposes. *See Pacific Legal Found. v. State Energy Res. Conservation & Dev. Comm'n*, 659 F.2d 903, 922-23 (9th Cir. 1981), *aff'd sub nom. Pacific Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190 (1983). It was for that reason that the Court of Appeals undertook to "inquire whether [the moratorium was] aimed at radiation hazards." *Id.* at 923. After a detailed analysis of the applicable statute and the history behind its enactment, the court concluded that the moratorium was "directed towards purposes other than protection against radiation hazards." *Id.* at 925. The Supreme Court in *Pacific Gas*, in turn, accepted the Ninth Circuit's determination. *See Pacific Gas*, 461 U.S. at 214-16.

access to the [proposed spent nuclear fuel storage] facility . . by designating it a state highway" and then "requiring the consent of the governor and the state legislature before" any "company engaged in the transportation or storage of" spent nuclear fuel was allowed to drive on it (the "Road Provisions"). *Id.* at 1251-52. As was true of the statute in *Pacific Gas*, and as is true of the Virginia statute challenged in the present case, the Road Provisions did not *directly* prohibit any activities regulated by the Act. In fact, the conduct the provisions *directly* addressed concerned transportation, a category traditionally subject to local control. Nevertheless, the Tenth Circuit recognized that regardless of the nature of the activity the provisions directly addressed, the applicable preemption analysis "requires consideration of the *purpose* of the allegedly preempted statute." *Id.* at 1252 (emphasis added).

As for what the actual purpose was, the court noted comments by the sponsoring legislator and the governor indicating that the provisions' purpose was to protect Utah citizens against the hazards of storage and transportation of nuclear waste by preventing those activities from occurring in Utah. *See id.* Observing that "Utah officials [did] not attempt to contest any of this evidence" and that it was unlikely that they could, the court concluded that "[t]he record . . . establishes that the Road Provisions were enacted for reasons of radiological safety and are therefore preempted." *Id.*

The court also conducted a similar analysis of provisions that "prohibit[ed] counties from providing 'municipal-type services,' including fire protection, garbage disposal, water, electricity, and law enforcement, to [spent nuclear fuel] transportation and storage facilities within the county." *Id.* at 1245. The court rejected the argument that provisions affecting these types of services were not preempted because such services "have been traditionally regulated by local governments." *Id.* at 1247. Rather, the court concluded that despite the fact that the subjects that the law *directly* addressed were traditionally left to local governments to regulate, "a state cannot use its authority to regulate law enforcement and other similar matters *as a means* of regulating radiological hazards."[16] *Id.* at 1248 (emphasis added).

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[16] At oral argument, the Commonwealth argued that *Skull Valley* was distinguishable from the present case because the Road Provisions were designed to prevent an activity regulated by the Act, nuclear waste storage. And the district court distinguished *Skull Valley* on the same basis. *See Virginia Uranium, Inc.*, 147 F. Supp. 3d at 473 n.13 ("The statute [in *Skull Valley*] plainly targeted nuclear-waste facilities and only 'regulate[d] law enforcement and other similar matters as a means of regulating radiological hazards.'"). This is not a valid distinction, however, considering that the Virginia statute was also designed to prevent – or at least significantly reduce the occurrence of – activities regulated by the Act, uranium milling and tailings management.

It is worth noting as well that, as the Supreme Court considered a petition for writ of certiorari in *Skull Valley*, the Court invited the Solicitor General to express the United States' views. The Solicitor General wholeheartedly endorsed the Tenth Circuit's analysis and took the view that certiorari should be denied. *See Nielson v. Private Fuel Storage, L.L.C.*, 2005 WL 2985709, at

The Second Circuit in *Entergy Nuclear Vermont Yankee, LLC v. Shumlin*, 733 F.3d 393 (2d Cir. 2013), engaged in a similar analysis, holding that the AEA preempted a Vermont law requiring that nuclear plants in Vermont can be operated only with the legislature's explicit approval. *See id.* at 414, 422. As with the statutes in *Pacific Gas* and the present case, the substance of the restriction the Vermont law imposed did not conflict with the AEA. *See Pacific Gas*, 461 U.S. at 212. Nevertheless, the court recognized that "a law enacted for th[e] purpose" of protecting against radiological dangers would "fall[] squarely within the prohibited field." *Entergy*, 733 F.3d at 415. Consequently, the court reasoned that, as in *Pacific Gas*, it was "'necessary to determine whether there is a non-safety rationale' for" the statute. *Id.* (quoting *Pacific Gas*, 461 U.S. at 213).

The text of the Vermont law explicitly declared that the statute was *not* grounded in nuclear safety concerns. *See id.* at 415-16. Nevertheless, the court noted that its "inquiry [into the legislature's motivation] does not end at the text of the statute." *Id.* at 416.

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*10, 13 (U.S. Nov. 4, 2005) ("Here, the lower courts found that the entirety of the series of interrelated laws at issue here were targeted specifically to regulate the safety aspects of the proposed waste facility and were designed to halt the construction and operation of the proposed facility based on radiation hazard concerns. In light of those factual determinations, the decision to find the entire statutory scheme preempted on its face is correct. . . . [W]hen a State enacts legislation based upon 'nuclear safety concerns,' the laws are preempted without the need to demonstrate their effect." (quoting *Pacific Gas*, 461 U.S. at 212-13)).

The court observed that, were the text determinative, "legislatures could nullify nearly all unwanted federal legislation by simply publishing a legislative committee report articulating some state interest or policy – other than the frustration of the federal objective – that would be tangentially furthered by the proposed state law." *Id.* (internal quotation marks omitted); *see also id.* ("We . . . decline Vermont's invitation to apply an analytic framework akin to 'rational basis review,' which would preclude us from identifying the true purpose of a statute as required by *Pacific Gas* and would allow states to implement a 'moratorium on nuclear construction grounded in safety concerns [that] falls squarely within the prohibited field.'" (quoting *Pacific Gas*, 461 U.S. at 213)). The court therefore proceeded to review various *extra*-textual indicia concerning the legislature's motivation for enacting the statute. *See id.* at 417-21. In the end, the Court of Appeals agreed with the district court that radiological safety concerns were the "primary purpose" for the statute's enactment, even if individual legislators may have acted for other reasons as well. *Id.* at 420; *see id.* at 420-22. The court thus concluded that the statute was preempted. *See id.* at 422. *See also Vermont Yankee Nuclear Power Corp. v. Entergy Nuclear Vt. Yankee, LLC*, 683 F.3d 1330, 1347 (Fed. Cir. 2012) ("[A] state law related to nuclear power is preempted if it . . . is motivated by safety concerns."); *United States v. Manning*, 527 F.3d 828, 836 (9th Cir. 2008) ("The [Act] preempts [state law] if . . . the purpose of the [state law] is to regulate against radiation hazards."); *United States v. Kentucky*, 252 F.3d 816, 823 (6th Cir. 2001) ("[T]he AEA

preempts any state attempt to regulate materials covered by the Act for safety purposes.").

I would apply the very same principles that animated the decisions in all of these cases and hold that Virginia Uranium has successfully alleged a claim under the doctrine of field preemption.

2. Conflict Preemption

In addition to being preempted for falling within the prohibited field, the Virginia statute is also preempted under the doctrine of conflict preemption because it "stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress." *Hines*, 312 U.S. at 67. As the Supreme Court explained in *Pacific Gas*, "[t]here is little doubt that a primary purpose of the . . . Act was, and continues to be, the promotion of nuclear power." 461 U.S. at 221; *see also* 42 U.S.C. § 5801. More specifically, an objective of the Act was to ensure that the development of nuclear energy would be sufficiently safe that the power of the private sector could be unleashed to develop nuclear energy "to the maximum extent consistent with the common defense and security and with the health and safety of the public." 42 U.S.C. § 2013(d); *see English*, 496 U.S. at 80-81; *Pacific Gas*, 461 U.S. at 213. It is hard to imagine how Virginia's mining ban, grounded on safety concerns regarding the radiological dangers the federal government is charged with regulating, would not be found to frustrate those objectives. Virginia, not trusting that the federal

government has sufficiently protected against the radiological dangers of uranium milling and tailings management, has unilaterally sought to *prevent the involvement of the very private-sector forces that the Act was designed to unleash*. Such an attempt would "be in the teeth of the . . . Act's objective to insure that [the development of nuclear source material is] safe enough for widespread development and use – and [would be] preempted for that reason" as well.[17] *Pacific Gas*, 461 U.S. at 213; *see Northern States Power Co. v. Minnesota*, 447 F.2d 1143, 1153-54 (8th Cir. 1971) ("Congress vested the AEC with the authority to resolve the proper balance between desired industrial progress and adequate health and safety standards. . . . Were the states allowed to impose stricter standards . . . , they might conceivably be so overprotective in the area of health and safety as to unnecessarily stultify the industrial development and use of atomic energy for the production of electric power."), *aff'd*, 405 U.S. 1035 (1972).

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[17] The district court concluded that there was no conflict between the Virginia legislature's judgment and that of Congress and the NRC because the ban reached only conventional mining and Congress and the NRC expressed no preference regarding whether uranium be recovered by conventional mining or other means. *See Virginia Uranium, Inc.*, 147 F. Supp. 3d at 477. But the fact that Congress did not express *a preference* for conventional mining over other means ignores the fact that, in many cases, conventional mining is the only feasible alternative and thus a ban on conventional mining is a de facto ban on uranium development, including here, where the ban affects the largest uranium deposit in the country.

Importantly, a state law is preempted for frustrating a federal statute's objectives "if it interferes with the methods by which the federal statute was designed to reach [its] goal." *International Paper Co. v. Ouellette*, 479 U.S. 481, 494 (1987); *see Columbia Venture, LLC v. Dewberry & Davis, LLC*, 604 F.3d 824, 830 (4th Cir. 2010). Although the district court suggested that the NRC could counter Virginia's efforts by condemning the property, *see Virginia Uranium, Inc.*, 147 F. Supp. 3d at 477 n.20, the availability of this option does not change the fact that Virginia has interfered with Congress's chosen method of uranium development, under which private parties such as Virginia Uranium would be free to engage in the regulated activities themselves without having to involve the federal government.

Virginia's interference with Congress's intended methods becomes even more apparent when one considers the clear route Congress set out for states that desire to assume the federal government's regulatory authority. Congress designed section 2021 of the Act to further "cooperation between the States and the Commission with respect to control of radiation hazards" and "to establish procedures and criteria" for the "assumption . . . by the States" of "certain of the Commission's regulatory responsibilities." 42 U.S.C. § 2021(a)(2), (4). For those reasons, the Act authorizes states "to enter into agreements" with the NRC "to regulate the materials covered by the agreement" for "the duration of such an agreement." 42 U.S.C. § 2021(b). Critically, though, a state seeking to enter such an agreement must first persuade the federal regulators

that the state's proposed regulations are "compatible with the Commission's program for the regulation of [the materials covered by the agreement]," and are "adequate to protect the public health and safety with respect to [those] materials." 42 U.S.C. § 2021(d). It is undisputed here that Virginia never obtained the authority to regulate uranium tailings. By attempting instead to eschew the system Congress established, and by *unilaterally* regulating against the dangers of uranium tailings under the pretext of regulating uranium mining, Virginia circumvented the Act's requirements and frustrated Congress's objectives.

Indeed, the Supreme Court found preemption on analogous facts in *Gade v. National Solid Wastes Management Association*, 505 U.S. 88 (1992). In that case, Illinois attempted to enforce training standards for certain hazardous waste workers that were stricter than the requirements of the federal Occupational Safety and Health Act of 1970 ("OSHA"). *See id.* at 93-94. OSHA allowed states to regulate an occupational safety and health issue themselves only "pursuant to [a federally] approved state plan that displaces the federal standards." *Id.* at 99 (plurality opinion). By giving states the option of displacing federal regulation entirely but conditioning states' rights to do so on federal approval, Congress was able "to promote occupational safety and health while at the same time avoiding duplicative, and possibly counterproductive, regulation." *Id.* at 102 (plurality opinion). The Court held that Illinois' attempt to supplement the federal regulations with its own standards without obtaining federal

approval, *see id.* at 93-95, frustrated OSHA's objectives because it "interfere[d] with the methods by which the federal statute was designed to" achieve its goals. *Id.* at 103 (plurality opinion); *see id.* at 104 n.2 (plurality opinion); *id.* at 109-14 (Kennedy, J., concurring in part and concurring in the judgment) (agreeing with the plurality's determination of the scope of the preemptive field but disagreeing with the plurality on the question of whether the preemption was implied or express). *See also International Paper Co.*, 479 U.S. at 495 (holding that Clean Water Act preempted Vermont nuisance suits to the extent that the suits sought to impose liability on a New York point source because such suits would allow "Vermont and other States [to] do indirectly what they could not do directly – regulate the conduct of out-of-state sources"); *cf. Arizona*, 132 S. Ct. at 2506-07 (holding that Arizona statute that "authoriz[ed] state officers to decide whether an alien should be detained for being removable . . . violate[d] the principle that the removal process is entrusted to the discretion of the Federal Government" and thus "create[d] an obstacle to the full purposes and objectives of Congress").

I would apply the principles espoused in *Pacific Gas*, *Gade*, and these other cases and hold that Virginia Uranium has successfully alleged a claim under the doctrine of conflict preemption as well.

III.

In sum, established Supreme Court law makes clear that the AEA preempts state statutes enacted for the purpose of protecting against the radiological dangers of activities the AEA regulates. Because the Commonwealth has conceded at this point in the litigation that its statute was enacted for just that purpose, the Virginia statute clearly falls within that prohibited field.

Moreover, the statute is also preempted because it frustrates the AEA's objectives. The Act is designed to allow the federal government to establish rules to ensure that uranium can be developed safely so that the power of the private sector may be utilized to *maximize* our country's ability to develop nuclear power. The Act allows states to assume regulatory authority, but only to the extent that the NRC has agreed to that assumption based on its approval of the state's regulatory program. By refusing to accept the federal government's exclusive role in protecting against the radiological dangers of uranium milling and tailings management, and by instead unilaterally seeking to restrict the occurrence of these activities based on its own safety concerns, Virginia has circumvented the AEA's requirements and frustrated its objectives and, in so doing, prevented development of the largest uranium deposit in the United States.

I would reverse the district court's dismissal of Virginia Uranium's action, and I respectfully dissent from the majority's contrary disposition.

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF VIRGINIA
DANVILLE DIVISION

VIRGINIA URANIUM, INC., et al., Plaintiffs, v. TERRY MCAULIFFE, et al., Defendants.	Case No.: 4:15-cv-00031 **MEMORANDUM OPINION** By: Hon. Jackson L. Kiser Senior United States District Judge

On November 6, 2015, I heard argument on Plaintiffs' Motion for Summary Judgment and Defendants' Rule 12(b)(1) and Rule 12(b)(6) Motions to Dismiss. The parties have fully briefed the motions, and I have reviewed the relevant filings and arguments of counsel. For the reasons stated herein, I will grant Defendants' motions and, accordingly, deny Plaintiffs' motion as moot.

I. STATEMENT OF FACTS AND PROCEDURAL BACKGROUND[1]

Located just to the northeast of Chatham, Virginia, the Coles Hill estate's gently sloped fields have been farmed by the Coles family

[1] At this stage, the facts are recited in the light most favorable to Plaintiffs, and reasonable inferences are drawn in their favor. *See Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009).

> since shortly after the Revolutionary War. Beneath those fields lies a deposit of approximately 119 million pounds of uranium ore – the largest natural deposit of uranium in the United States and one of the largest in the world.

(Compl. ¶ 24, Aug. 5, 2015 [ECF No. 1].) Plaintiffs Coles Hill, LLC, and Bowen Minerals, LLC, own the land above the Coles Hill uranium deposit. (*Id.* ¶¶ 10, 11, 25.) While "retaining a royalty interest," they lease the mineral estate to Plaintiff Virginia, Uranium, Inc., which is owned by Plaintiff Virginia Energy Resources, Inc. (*Id.* ¶¶ 9-12, 25.) The lease is to last until 2045. (*Id.* ¶¶ 9, 25.)

"Developing the uranium deposit beneath Coles Hill would entail . . . mining, milling, and tailings[2] management." (*Id.* ¶ 29.) The raw uranium ore would "likely be extracted through a conventional underground mine." (*Id.* ¶ 30.) This mining would be similar to that for "coal, titanium, and numerous other minerals . . . mined in Virginia." (*Id.*)

Once extracted from the ground, the uranium ore must be "*milled* or processed into useable form." (*Id.* ¶ 31.) This processing "[t]ypically" involves an on-site mill. (*Id.*) The mill would "grind[] the uranium ore into a sand, which [would] then run through either an acidic or alkaline solution to separate pure uranium

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[2] Tailings are "the rock left behind when . . . uranium is removed from the raw ore." (Compl. ¶ 32.) These are wastes, a "radioactive byproduct." (*See id.* ¶ 5.) Wastes might also be left when mining uranium ore from the ground. (*See id.*)

from . . . 'tailings.'" (*Id.*) The uranium would, then, be "concentrated and dried into 'yellowcake,' . . . the final product that is commercially sold and shipped off-site for enrichment." (*Id.*)

The mill tailings "must be securely stored, to prevent any radioactive materials from escaping into the air, leaking into the groundwater, [or] being released to surface waters." (*Id.* ¶ 34.) At Coles Hill, mill tailings would be stored in a management facility "in safe and reliable below-grade cells, which are capped on top with synthetic and earthen materials to prevent the release of radioactive materials into the air, and lined on the bottom with multiple layers of heavy-duty materials to prevent any release into the surrounding soil or groundwater." (*Id.* ¶ 32.)

Although Virginia's Department of Mines, Minerals, and Energy has permitted Virginia Uranium, Inc., "to engage in 'exploration activity'" to learn "the nature and extent of the Coles Hills deposit" (*id.* ¶ 75), Va. Code Ann. § 45.1-283 prevents any Virginia agency from accepting Virginia Uranium's application for a permit to mine it (*id.* ¶¶ 2, 4, 59, 98-99).[3]

On August 5, 2015, Virginia Uranium, Inc., Coles Hill, LLC, Bowen Minerals, LLC, and Virginia Energy Resources, Inc., ("Plaintiffs") filed suit for declaratory

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[3] The Commonwealth of Virginia has agreed to assume some of the Nuclear Regulatory Commission's regulatory authority but none over uranium milling or mill tailings' management. (Compl. ¶ 49.)

and injunctive relief against Virginia's Governor, Secretary of Commerce and Trade, Secretary of Natural Resources, and various officials affiliated with the Department of Environmental Quality ("DEQ") or the Department of Mines, Minerals, and Energy ("Defendants"). Plaintiffs seek a declaration that the Atomic Energy Act of 1954, 42 U.S.C. § 2011 et seq., as amended, ("AEA") preempts Va. Code Ann. § 45.1-283. (*Id.* ¶ 111.) They also seek an injunction, forbidding Defendants from adhering to Va. Code Ann. § 45.1-283 and requiring them, instead, to process permit applications for uranium mining. (*Id.*) Defendants move to dismiss, all contending that the AEA does not preempt Va. Code Ann. § 45.1-283. Several Defendants have asserted Eleventh-Amendment immunity as an alternate ground for dismissal.

II. STANDARDS OF REVIEW

"To survive a [Rule 12(b)(6)] motion to dismiss, a complaint must contain sufficient factual matter, accepted as true, to 'state a claim to relief that is plausible on its face.'" *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009) (quoting *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 570 (2007)). "A claim has facial plausibility when the pleaded factual content allows the court to draw the reasonable inference that the defendant is liable for the misconduct alleged." *Id.* A "'court need not accept the [plaintiff's] legal conclusions drawn from the facts, nor need it accept as true unwarranted inferences, unreasonable conclusions, or arguments.'" *Philips v. Pitt Cnty. Mem'l Hosp.*, 572 F.3d 176, 180 (4th Cir. 2009)

(alteration in original) (quoting *Wahi v. Charleston Area Med. Ctr., Inc.*, 562 F.3d 599, 616 n.26 (4th Cir. 2009)). "When a complaint raises an arguable question of law which the district court ultimately finds is correctly resolved against the plaintiff, dismissal on Rule 12(b)(6) grounds is appropriate. . . ." *Neitzke v. Williams*, 490 U.S. 319, 328 (1989).

When a state official moves, under Rule 12(b)(1),[4] to dismiss for Eleventh-Amendment immunity and asserts no factual matter beyond the complaint, a court need only determine whether the "complaint fails to allege facts" that would subject the official to suit. *See Adams v. Bain*, 697 F.2d 1213, 1219 (4th Cir. 1982). "In that event, all the facts alleged in the complaint are assumed to be true and the plaintiff, in effect, is afforded the same procedural protection as he would receive under a Rule 12(b)(6) consideration." *Id.*

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[4] "Difficult as it may be to describe precisely the nature of Eleventh Amendment immunity," *Constantine v. Rectors & Visitors of George Mason Univ.*, 411 F.3d 474, 482 (4th Cir. 2005), "'[t]he recent trend . . . appears to treat Eleventh Amendment immunity motions under Rule 12(b)(1),'" *Pele v. Pa. Higher Educ. Assistance Agency*, 13 F. Supp. 3d 518, 521 (E.D. Va. 2014) (quoting *Skaggs v. W. Reg'l Jail*, No. CIV. A. 3:13-3293, 2014 WL 66645, at *4 (S.D. W. Va. Jan. 8, 2014)).

III. DISCUSSION

A. The Governor, the two Cabinet Secretaries, and the DEQ officials are immune from suit.

The Governor, the Secretary of Commerce and Trade, the Secretary of Natural Resources, and the DEQ officials invoke Eleventh-Amendment immunity.

> Under the Eleventh Amendment, "[t]he judicial power of the United States shall not be construed to extend to any suit in law or equity, commenced or prosecuted against one of the United States by Citizens of another State or by Citizens or Subjects of any Foreign State." The United States Supreme Court has read the Eleventh Amendment to render States immune from being hauled into federal court by private parties.

Wright v. North Carolina, 787 F.3d 256, 261 (4th Cir. 2015) (alteration in original) (quoting U.S. Const. amend XI).

> [T]he essence of the immunity is that the State cannot be sued in federal court at all, even where the claim has merit, and the importance of immunity as an attribute of the States' sovereignty is such that a court should address that issue promptly once the State asserts its immunity.

Constantine v. Rectors & Visitors of George Mason Univ., 411 F.3d 474, 482 n.4 (4th Cir. 2005).

A state official's protection is "less robust" than a state's. *See Wright*, 787 F.3d at 261. "[A] state official

ceases to represent the state when it attempts to use state power in violation of the Constitution. Such officials thus may be enjoined from such unconstitutional action . . . but only if they have some connection with the enforcement of an unconstitutional act." *Id.* (citations and internal quotation marks omitted). This connection, or "special relation," "requires *proximity to* and *responsibility for* the challenged state action." *Id.* at 261-62 (citations and internal quotation marks omitted). In contrast, "'a generalized duty to enforce state law or general supervisory power over the persons responsible for enforcing the challenged provision will not subject an official to suit.'" *Ass'n des Eleveurs de Canards et d'Oies du Quebec v. Harris*, 729 F.3d 937, 943 (9th Cir. 2013) (quoting *Coal. to Defend Affirmative Action v. Brown*, 674 F.3d 1128, 1134 (9th Cir. 2012)), *cert. denied*, 135 S. Ct. 398 (2014); *see Wright*, 787 F.3d at 262; *Hutto v. S.C. Ret. Sys.*, 773 F.3d 536, 550 (4th Cir. 2014).

Neither the Governor nor the two Cabinet Secretaries are sufficiently connected to Va. Code Ann. § 45.1-283's implementation to be subject to suit. Plaintiffs allege that these officials generally supervise or set policy for departments involved in Va. Code Ann. § 45.1-283's implementation. (Compl. ¶¶ 13, 14, 18.) These general roles are insufficiently proximate to or responsible for the challenged conduct and do not strip

these officials of their Eleventh-Amendment immunity.[5] The Governor and the two Cabinet Secretaries are immune from suit.

The DEQ officials are also insufficiently connected to the challenged conduct. Plaintiffs claim that Va. Code Ann. § 45.1-283 prevents the DEQ officials from issuing four permits necessary for the proposed mining operation: a Prevention of Significant Deterioration permit, a Major Source of Hazardous Air Pollutants permit, a Virginia Pollutant Discharge Elimination System permit, and a Hazardous Waste Management Facility permit. (*Id.* ¶¶ 55-58.) Va. Code Ann. § 45.1-283 prohibits "any agency of the Commonwealth" from accepting "permit applications for uranium mining." The four identified permits are not "for uranium mining" but, respectively, for constructing a "major emitting facility," 42 U.S.C. § 7475(a), for constructing and operating a "major source of hazardous air pollutants," 9 Va. Admin. Code § 5-80-1420(A), for discharging "sewage, industrial wastes, other wastes, or any noxious or deleterious substances" into state waters, Va.

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[5] Contrary to Plaintiffs' argument, the Governor's policy positions are too far attenuated from Va. Code Ann. § 45.1-283's implementation, *see, e.g.*, *Waste Mgmt. Holdings, Inc. v. Gilmore*, 252 F.3d 316, 330-31 (4th Cir. 2001), and the inquiry does not concern the challenged law's nature, *see Ex Parte Young*, 209 U.S. 123, 157 (1908). Addressing the two Cabinet Secretaries, Plaintiffs misplace their reliance on *Papasan v. Allain*, where the Supreme Court merely noted that, owing to his general supervisory authority over local school officials, Mississippi's Secretary of State could be enjoined "[*t*]*o the extent that*" his conduct "violate[d] the Equal Protection Clause." 478 U.S. 265, 282 n.14 (1985) (emphasis added).

Code Ann. § 62.1-44.5(A)(1), and for "stor[ing], provid[ing] treatment for, or dispos[ing] of a hazardous waste," *id.* § 10.1-1426(A). Va. Code Ann. § 45.1-283 might obviate Plaintiffs' application for these permits, but it does not prohibit the DEQ from accepting applications for them. The DEQ officials are immune from suit.

B. The AEA does not preempt Va. Code Ann. § 45.1-283.[6]

"Under the Supremacy Clause, federal statutes are part of 'the supreme law of the land.' A long-standing principle of our jurisprudence teaches that, where there is a clash between state and federal laws, federal law prevails." *Sukumar v. Nautilus, Inc.*, 829 F. Supp. 2d 386, 392 (W.D. Va. 2011) (quoting U.S. Const. art. VI, cl. 2). "Under this principle, Congress has the power to preempt state law." *Arizona v. United States*, 132 S. Ct. 2492, 2500 (2012). Preemption, however, is not a metaphor for state law being "effortlessly overrun by each and every federal mandate." *See Sukumar*, 829 F. Supp. 2d at 392. "[C]ourts should assume that 'the historic police powers of the States' are not superseded 'unless that was the clear and manifest purpose of

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[6] Defendants suggest that discussion in *Armstrong v. Exceptional Child Center, Inc.*, 135 S. Ct. 1378, 1383 (2015), might reveal Plaintiffs to lack a right of action. Distinguishing the Supreme Court's rejection of the notion that the Supremacy Clause implies a private right of action, Plaintiffs correctly rely on its acknowledgment that a party may invoke a federal court's equitable jurisdiction to enjoin preempted conduct. *See id.* at 1384.

Congress.'" *Arizona*, 132 S. Ct. at 2501 (quoting *Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218, 230 (1947)).

The primary categories of preemption are "express, field, and conflict." *Sukumar*, 829 F. Supp. 2d at 392. They "are not 'rigidly distinct,'" *Crosby v. Nat'l Foreign Trade Council*, 530 U.S. 363, 372 n.6 (2000) (quoting *English v. Gen. Elec. Co.*, 496 U.S. 72, 79 n.5 (1990)), and "'the purpose of Congress is the ultimate touchstone in every pre-emption case,'" *Epps v. JP Morgan Chase Bank, N.A.*, 675 F.3d 315, 322 (4th Cir. 2012) (quoting *Wyeth v. Levine*, 555 U.S. 555, 565 (2009)). Plaintiffs invoke both field and conflict preemption.

1. Va. Code Ann. § 45.1-283 intrudes into no AEA field.

Under field preemption,

> Congress occupies a certain field by regulating so pervasively that there is no room left for the states to supplement federal law, or where there is a federal interest . . . so dominant that the federal system will be assumed to preclude enforcement of state laws on the same subject.

United States v. South Carolina, 720 F.3d 518, 528-29 (4th Cir. 2013) (omission in original) (citations and internal quotation marks omitted). "'[W]hen the Federal Government completely occupies a given field or an identifiable portion of it, . . . the test of preemption is whether the matter on which the State asserts the

right to act is in any way regulated by the Federal Act.'" *North Carolina ex rel. Cooper v. Tenn. Valley Auth.*, 615 F.3d 291, 303-04 (4th Cir. 2010) (omission in original) (quoting *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 212-13 (1983)).

"'Every Act of Congress occupies some field, but [a court] must know the boundaries of that field before [it] can say that [the Act] has precluded a state from the exercise of any power reserved . . . by the Constitution.'" *Keller v. City of Fremont*, 719 F.3d 931, 942 (8th Cir. 2013) (quoting *De Canas v. Bica*, 424 U.S. 351, 360 n.8 (1976)), *cert. denied*, 134 S. Ct. 2140 (2014). "To determine the boundaries that Congress sought to occupy within the field, '[a court] look[s] to the federal statute itself, read in the light of its constitutional setting and its legislative history.'" *Lozano v. City of Hazleton*, 724 F.3d 297, 303 (3d Cir. 2013) (quoting *De Canas*, 424 U.S. at 360 n.8), *cert. denied*, 134 S. Ct. 1491 (2014). "Statutory text and structure provide the most reliable guideposts in this inquiry." *PPL EnergyPlus, LLC v. Nazarian*, 753 F.3d 467, 474 (4th Cir. 2014), *cert. granted sub nom. CPV Md., LLC v. PPL EnergyPlus, LLC*, 136 S. Ct. 356 (2015), *and cert. granted sub nom. Hughes v. PPL EnergyPlus, LLC*, 136 S. Ct. 382 (2015).

The Atomic Energy Act of 1946, Pub. L. No. 585, ch. 724, 60 Stat. 755, reflected Congress' postwar desire to extend the use of atomic energy to civilian (although still largely governmental) purposes in order to "assur[e] the common defense and security" and "improv[e] the public welfare," among other goals, *see id.*

§ 1(a), 60 Stat. at 755-56. It imposed several regulatory fields, including one respecting "source material." *Id.* § 5(b), 60 Stat. at 761-63. The provisions on source materials were substantially adopted in the Atomic Energy Act of 1954, Pub. L. No. 703, ch. 1073, 68 Stat. 919, which replaced the 1946 legislation. Although there have been significant amendments in the interim, the 1954 legislation is the AEA's foundation.

Since 1954, Congress has premised its regulatory authority over "[t]he processing and utilization" of source materials on its powers respecting "interstate and foreign commerce," "common defense and security," and public "health and safety." 42 U.S.C. § 2012(c), (d); ch. 1073, § 1(c), (d), 68 Stat. at 921. The 1954 legislation "stemmed from Congress' belief that the national interest would be served if the Government encouraged the private sector to develop atomic energy for peaceful purposes under a program of federal regulation and licensing." *English*, 496 U.S. at 81. As it did in the 1946 legislation, *see generally* ch. 724, 60 Stat. at 761-63, Congress gave the Atomic Energy Commission ("AEC") regulatory and licensing authority over (among other things) certain source materials, *see generally* ch. 1073, 68 Stat. at 932-35. Today, the Nuclear Regulatory Commission ("NRC") has that authority. 42 U.S.C. § 2141(a); Energy Reorganization Act of 1974, Pub. L. No. 93-438, 88 Stat. 1233.

As relevant here, the AEA has addressed source materials in much the same manner since 1954 and even since 1946. The AEA defines "source material" to mean

> (1) uranium, thorium, or any other material which is determined by the [NRC] pursuant to the provisions of section 2091 of this title to be source material; or (2) ores containing one or more of the foregoing materials, in such concentration as the [NRC] may by regulation determine from time to time.

42 U.S.C. § 2014(z); *see also* ch. 1073, § 11(s), 68 Stat. at 924; ch. 724, § 5(b)(1), 60 Stat. at 761. An NRC license is required to

> transfer or receive in interstate commerce, transfer, deliver, receive possession of or title to, or import into or export from the United States any source material *after removal from its place of deposit in nature*, except that licenses shall not be required for quantities of source material which, in the opinion of the [NRC], are unimportant.

42 U.S.C. § 2092 (emphasis added); *see also* ch. 1073, § 62, 68 Stat. at 932; ch. 724, § 5(b)(2), 60 Stat. at 761. The NRC has authority and discretion to issue

> rules, regulations, or orders requiring reports of ownership, possession, extraction, refining, shipment, or other handling of source material . . . , except that such reports shall not be required with respect to (a) any source material *prior to removal from its place of deposit in nature*, or (b) quantities of source material which in the opinion of the [NRC] are unimportant or the reporting of which will discourage independent prospecting for new deposits.

42 U.S.C. § 2095 (emphasis added); *see also* ch. 1073, § 65, 68 Stat. at 933; ch. 724, § 5(b)(4), 60 Stat. at 761-62. The AEA confers no federal regulatory or licensing authority over nonfederal uranium deposits or their conventional mining. It has never done so.

As traditionally understood, the Commonwealth of Virginia is the "paramount proprietor[]" over its mineral lands. *See* 1 Curtis H. Lindley, *A Treatise on the American Law Relating to Mines and Mineral Lands* §§ 18, 19, at 38-39 (3d ed. 1914) (1988 reprint); *cf. Kidd v. Pearson*, 128 U.S. 1, 21 (1888) (including "mining" among the "interests which in their nature are, and must be, local in all the details of their successful management").[7] The Virginia General Assembly has enacted schemes by which one must apply to an appropriate state agency for a permit to mine in the Commonwealth. *See, e.g.*, Va. Code Ann. § 45.1-161.57 et seq. (coal); *id.* § 45.1-161.292:30 et seq. (mineral); *id.* § 45.1-181.

By emergency legislation of April 7, 1982, the General Assembly forbade any state agency's acceptance of a uranium-mining permit application until July 1, 1983. Act of Apr. 7, 1982, ch. 269, 1982 Va. Acts 426, 428 (codified as amended at Va. Code Ann. § 45.1-283). Enacted findings and policies undergirded the moratorium and related statutes. Notable "purposes" were "to

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[7] The Commonwealth has accomplished "primacy" under the Surface Mining Control and Reclamation Act of 1977, 30 U.S.C. § 1201 et seq., as amended. 13A *Michie's Jurisprudence of Virginia & West Virginia* § 74.1, at 126 (Repl. Vol. 2011).

assure," within proper state or local authority, "that uranium mining and milling w[ould] be subject to statutes and regulations which protect the environment and the health and safety of the public." *Id.* at 427 (codified at Va. Code Ann. § 45.1-272).[8] Notable among the findings was "that the adoption of additional statutes during the 1983 Session . . . may be necessary in order to assure that any uranium mining and milling which may occur in the Commonwealth will not adversely affect the environment or the public health and safety." *Id.*[9]

During the 1983 session, the General Assembly amended the moratorium statute to the following, which remains unchanged:

> Notwithstanding any other provision of law, permit applications for uranium mining shall not be accepted by any agency of the Commonwealth prior to July 1, 1984, and until a program for permitting uranium mining is established by statute. For the purpose of construing § 45.1-180(a), uranium mining shall be deemed to have a significant effect on the surface.

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[8] Although not set out in the official Code, these policies and findings remain law. *See* Editor's Note *to* Va. Code Ann. § 45.1-272 (Repl. Vol. 2013).

[9] The General Assembly has enacted no statute purporting to regulate uranium milling.

Act of Feb. 24, 1983, ch. 3, 1983 Va. Acts 3, 3 (codified at Va. Code Ann. § 45.1-283). No Virginia statute has established a program for permitting uranium mining.

The AEA institutes no permitting regime respecting nonfederal uranium deposits' conventional mining and does not otherwise regulate nonfederal uranium deposits or their conventional mining. Fairly stated, these are the matters on which the Commonwealth, by Va. Code Ann. § 45.1-283, has asserted the right to act. Va. Code Ann. § 45.1-283 survives the test of field preemption.

Plaintiffs acknowledge that the AEA does not address a nonfederal uranium deposit's conventional mining;[10] however, they contend that the General Assembly impermissibly premised Va. Code Ann. § 45.1-1283 on radiological safety concerns – what they identify as the pertinent regulatory field. Plaintiffs focus the Court on 42 U.S.C. § 2021(k): "Nothing in this section shall be construed to affect the authority of any state or local agency to regulate activities for purposes other than

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[10] Plaintiffs cast the AEA as intentionally omitting conventional mining of nonfederal uranium deposits, given Congress' perception that it posed no serious radiological safety risks and Congress' desire to encourage the development of atomic energy. Plaintiffs cite legislative materials for these propositions, but the cited materials do not go so far as to evince preemptive intent from the omission. *See Uranium Mill Tailings Control: Hearings on H.R. 13382, H.R. 12938, H.R. 12535, and H.R. 13049 Before the H. Subcomm. on Energy & the Env't*, 95th Cong. 159 (1978) (statement of George Gleason, Exec. Vice President & Gen. Counsel, Am. Nuclear Energy Council); S. Rep. No. 79-1211, at 18 (1946); *Atomic Energy: Hearing on H.R. 4280 Before the H. Comm. on Military Affairs*, 79th Cong. 125-126 (1945).

protection against radiation hazards." They seem to read this language as signifying that no state may regulate *any* activity with the intent to protect against radiation hazards, unless by agreement with the NRC. Although the General Assembly enacted Va. Code Ann. § 45.1-283 out of concern for uranium (and, therefore, radiological) safety, *see* ch. 269, 1982 Va. Acts at 427 (codified at Va. Code Ann. § 45.1-272), Plaintiffs misread 42 U.S.C. § 2021(k).

Of nearest pertinence to this litigation, 42 U.S.C. § 2021(k)'s encompassing section is meant "to clarify" the states' and the NRC's "respective responsibilities under [the AEA] . . . with respect to the regulation of . . . source . . . materials," 42 U.S.C. § 2021(a)(1), and "to establish procedures and criteria for discontinuance of certain of the [NRC's] regulatory responsibilities with respect to . . . source . . . materials, and the assumption thereof by the States," *id.* § 2021(a)(4). Under the enacted scheme, the NRC may agree with a state to discontinue certain regulatory authority,[11] which the state will assume, over a source material. *Id.* § 2021(b)(2). With an agreement, a state will have "authority to regulate the materials covered by the agreement for the protection of the public health and safety from radiation hazards." *Id.* With or without an agreement, a state has authority to regulate any source material for other purposes. *See id.* § 2021(k). Read

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[11] For example, the NRC may not discontinue, for state assumption, authority over the export or import of source materials into the United States or the disposal of source materials into the ocean or sea. 42 U.S.C. § 2021(c)(2)-(3); *see also id.* § 2021(c)(4).

together, these provisions reasonably imply – at most – that, lacking a discontinuance-and-assumption agreement, a state has no authority to protect the public's health and safety from radiation hazards by regulating a source material under the NRC's authority.

These provisions of 42 U.S.C. § 2021 are not original to the AEA but were added by Act of September 23, 1959, Pub. L. No. 86-373, 73 Stat. 688. While considering this legislation, Congress was aware that the AEA did not regulate nonfederal uranium deposits or their conventional mining.[12] Clarifying its intent to take no

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[12] The proposition was repeated in pertinent congressional hearings. *Federal-State Relationships in the Atomic Energy Field: Hearings Before the J. Comm. on Atomic Energy*, 86th Cong. 60 (1959) (statement of Robert Lowenstein, Office of Gen. Counsel, Atomic Energy Comm'n) ("With respect to mining as such, the [AEC] has taken the position, I believe, in an earlier hearing, and an opinion was furnished by the general counsel, that the [AEC] under the [AEA] does not regulate mining."); *id.* at 83 (written statement of H.L. Price, Director, Div. of Licensing & Regulation, Atomic Energy Comm'n) ("The [AEC] does not have regulatory jurisdiction over such other sources of radiation as X-ray equipment or radium or over the mining of uranium."); *id.* at 130 (statement of Lee M. Hydeman, Co-Director, Atomic Energy Research Project, Univ. of Mich. Law Sch.) ("The AEC does not exercise any regulatory control over the mining of uranium ore."); *id.* at 257 (statement of P. W. Jacoe, Colo. State Dep't of Pub. Health) ("As you know, the [AEC's] regulatory powers regarding radiation hazards apply to the uranium mills and processing plants but not to the mines."); *id.* at 329 (statement of Rep. Wayne N. Aspinall) (describing "the mining" as "an area where the Federal Government has not assumed and undoubtedly will not assume any jurisdiction"); *id.* at 340 (statement of John Curran, Dep't of Legis., AFL-CIO) ("While it does issue licenses to mining concerns governing possession and transfer of source materials, the [AEC] exercises no regulatory power over actual mining operations."); *id.* at 341

greater regulatory role over any source (or other) material, the Joint Committee on Atomic Energy redrafted an earlier version of the eventually-enacted bill "to make it clear that it d[id] not attempt to regulate materials which the AEC d[id] not [then] regulate under the Atomic Energy Act of 1954." S. Rep. No. 86-870 (1959), *as reprinted in* 1959 U.S.C.C.A.N. 2872, 2875, 2880. The Joint Committee observed that "[s]uch other sources such as x-ray machines and radium also present substantial radiation hazards, but have been for many years the responsibility of the states, the public health service, or other agencies." *Id.* at 2875. Clearly, the Joint Committee and the enacting Congress intended to similarly respect the states' and other agencies' preexisting authority over nonfederal uranium deposits and their conventional mining.

Congress did not intend 42 U.S.C. § 2021 to broaden the preemptive field respecting source materials so as to include materials outside of the NRC's

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(statement of Rep. Chet Holifield) ("The [AEC] exercises no regulatory powers over mining operations. This is true."); *see id.* at 350 (written statement submitted by John Curran, Dep't of Legis., AFL-CIO) (criticizing the proposed legislation for failing to address "the most important sources of man-made radiation," including "uranium mines" among others, "none of which are presently under the jurisdiction of the [AEC], nor any provision being made that certain of these sources be controlled by State programs as a condition of approval of the Federal-State agreement by the [AEC]"); *cf. id.* at 447-48 (statement of Leo Goodman, United Auto. Workers) (asserting, to Congressman Holifield's doubt, that the AEC had regulatory authority over uranium mining); *id.* (letter of Leo Goodman, United Auto. Workers) (following up to offer mining statutes – not the AEA – as authority).

regulatory authority. The statute's text and history clarify that the NRC's agreement is neither conceived nor necessary for a state to regulate a material or activity traditionally (or otherwise) under its authority and not the NRC's. The discontinuance-and-assumption scheme does not relate to the authority on which Va. Code Ann. § 45.1-283 rests.

Attempting to identify Va. Code Ann. § 45.1-283's intrusion into a federal field of radiological safety concerns, Plaintiffs invoke various precedents but rely largely on *Pacific Gas & Electric Co.*, 461 U.S. 19.[13]

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[13] Of the decisions Plaintiffs invoke, none answers the question whether the AEA preempts a state's regulation or prohibition of a nonfederal uranium deposit's conventional mining.

Deserving closer scrutiny, Plaintiffs argue by analogy from *Skull Valley Band of Goshute Indians v. Nielson*, 376 F.3d 1223 (10th Cir. 2004), where the court held that the AEA and the Nuclear Waste Policy Act of 1982, 42 U.S.C. § 10101 et seq., preempted Utah laws on, among other things, roads and municipal services. Plaintiffs identify these road laws and one of the municipal-services laws as addressing matters within the heart of a state's traditional police powers but preempted, nonetheless, for their underlying purposes of radiological safety. The analogy is too loose to guide the analysis here.

The Utah laws targeted a proposed storage facility for spent nuclear fuel, for which a federal license was pending. *See id* at 1227-28. "[I]n order to prevent the transportation and storage of [spent nuclear fuel] in Utah," the road legislation, Utah Code Ann. §§ 54-4-15, 72-3-301, 72-4-125(4), 78-34-6(5), "jeopardiz[ed] access to the proposed . . . facility" and, by imposing a present and "substantial obstacle to the construction of a[spent nuclear fuel] facility," "directly and substantially affect[ed] decisions regarding radiological safety levels by those operating nuclear facilities." *Skull Valley Band of Goshute Indians*, 376 F.3d at 1230, 1251-53. The pertinent municipal-services law, Utah Code Ann.

A court must heed the cautions that "'[g]eneral expressions, in every opinion, are to be taken in connection with the case in which those expressions are used,'" *Ameur v. Gates*, 759 F.3d 317, 324 (4th Cir. 2014) (quoting *Ark. Game & Fish Comm'n v. United States*, 133 S. Ct. 511, 520 (2012)), and that "dicta . . . cannot serve as a source of binding authority in American jurisprudence," *United States v. Pasquantino*, 336 F.3d 321, 329 (4th Cir. 2003) (en banc), *aff'd*, 544 U.S. 349 (2005). Of special concern here, the Supreme Court's AEA preemption decisions consider a field respecting the construction or operation of nuclear-power facilities, not source materials, *see English*, 496 U.S. 72; *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238 (1984); *Pac. Gas & Elec. Co.*, 461 U.S. 190; *N. States Power Co. v. Minnesota*, 405 U.S. 1035 (1972) (mem.), *aff'g* 447 F.2d 1143 (8th Cir. 1971), and the decisions,

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§ 17-34-1(3), prohibited any county from "provid[ing], contract[ing] to provide, or agree[ing] in any manner to provide municipal-type services . . . to any area under consideration for a storage facility or transfer facility for the placement of high-level nuclear waste, or greater than class C radioactive waste" and from "seek[ing] to fund services for these facilities by" tax, service charge, or fee. The statute plainly targeted nuclear-waste facilities and only "regulate[d] law enforcement and other similar matters as a means of regulating radiological hazards." *Skull Valley Band of Goshute Indians*, 376 F.3d at 1248.

In enacting Va. Code Ann. § 45.1-283, the General Assembly did not extend its traditional authority so as to reach activities subject to the NRC's regulation. Utah's legislature, however, specifically targeted its traditional police powers so as to impede and prevent a would-be federal licensee's activities under a potential NRC license. *Skull Valley Band of Goshute Indians* does not reveal Va. Code Ann. § 45.1-283 to intrude into an AEA field.

rendered on full briefing and argument, differ in dispositive reasoning, *compare English*, 496 U.S. at 84-85 (holding that a tort arising from whistleblower retaliation at a nuclear facility was insufficiently related to radiological safety aspects in the facility's operation), *and Silkwood*, 464 U.S. at 256 (holding that legislative history revealed no congressional intent to preempt punitive damages for torts arising from an employee's radioactive incident at a nuclear powerplant), *with Pac. Gas & Elec. Co.*, 461 U.S. at 216 (holding that a limitation on new nuclear powerplants was economic in nature).

In *Pacific Gas & Electric Co.*, 461 U.S. at 222, the Supreme Court held that the AEA did not preempt Cal. Pub. Res. Code § 25524.2, *as enacted by* Act of June 3, 1976, ch. 196, § 1, 1976 Cal. Stat. 378. As material to the Supreme Court's inquiry, that statute generally provided,

> No nuclear fission thermal powerplant . . . shall be permitted land use in the state, or where applicable, be certified by the [State Energy Resources and Development Commission] until . . . :
>
> (a) The commission finds that . . . [the NRC] has approved and there exists a demonstrated technology or means for the disposal of high-level nuclear waste.
>
> (b) The commission has reported its findings and the reasons therefor . . . to the Legislature. . . . The commission may proceed to certify nuclear fission thermal powerplants

> 100 legislative days after reporting its findings unless within [that period] either house of the Legislature . . . disaffirm[s] the findings. . . .

Ch. 196, § 1, 1976 Cal. Stat. at 378. Then, as now, the AEA provided that the NRC would "retain authority and responsibility with respect to regulation of . . . the construction and operation of any production or utilization facility . . . ," 42 U.S.C. § 2021(c)(1), including a nuclear powerplant subject to Cal. Pub. Res. Code § 25524.2, *see id.* § 2014(v), (cc).

The power company and supporting amici curiae argued that Cal. Pub. Res. Code § 25524.2 "regulate[d] construction of nuclear plants" and was "allegedly predicated on safety concerns," "ignor[ing] the division between federal and state authority created by the [AEA], and fall[ing] within the field that the Federal Government ha[d] preserved for its own exclusive control." *Pac. Gas & Elec. Co.*, 461 U.S. at 204.

At the outset, the Supreme Court observed that the AEA "does not at any point expressly require the States to construct or authorize nuclear power plants or prohibit the States from deciding, as an absolute or conditional matter, not to permit the construction of any further reactors." *Id.* at 205. It rejected the power company's argument that the AEA "intended to preserve the Federal Government as the sole regulator of all matters nuclear" and, instead, read the AEA to evince Congress' "inten[t] that the Federal Government should regulate the radiological safety aspects

involved in the construction and operation of a nuclear plant, but that the States retain their traditional responsibility in the field of regulating electrical utilities for determining questions of need, reliability, cost and other related state concerns." *Id. Compare* 42 U.S.C. § 2018, *with id.* § 2021(c)(1). After further surveying the AEA and its history, the Supreme Court summarized "the dual regulation of nuclear-powered electricity generation: the Federal Government maintains complete control of the safety and 'nuclear' aspects of energy generation; the States exercise their traditional authority over the need for additional generating capacity, the type of generating facilities to be licensed, land use, ratemaking, and the like." *Pac. Gas & Elec. Co.*, 461 U.S. at 211-12. The Supreme Court considered the "more difficult" question to be Cal. Pub. Res. Code § 25524.2's "constru[ction] and classifi[cation]." *Id.* at 212.

The Supreme Court read Cal. Pub. Res. Code § 25524.2 as "not seek[ing] to regulate the construction or operation of a nuclear powerplant" and added that a statute seeking to do so "would clearly be impermissible . . . even if enacted out of nonsafety concerns" because it would "directly conflict with the NRC's exclusive authority over plant construction and operation." *Id.* at 212. Rejecting California's "broad[]" argument "that although safety regulation of nuclear plants by States is forbidden, a State may completely prohibit new construction until its safety concerns are satisfied by the Federal Government," the Supreme

Court opined that "the Federal Government ha[d] occupied the entire field of nuclear safety concerns, except the limited powers expressly ceded to the States" and added that "[a] State moratorium on nuclear construction grounded in safety concerns falls squarely within the prohibited field." *Id.* at 212-13. The Supreme Court considered it "necessary to determine" whether Cal. Pub. Res. Code § 25524.2 had "a nonsafety rationale." *See id.* at 213. Because "the rationale for enacting § 25524.2" was an "economic purpose," the Supreme Court concluded that "the statute l[ay] outside the occupied field of nuclear safety regulation." *Id.* at 216.

Plaintiffs invoke *Pacific Gas & Electric Co.* largely for its language, "the Federal Government has occupied the entire field of nuclear safety concerns, except the limited powers expressly ceded to the States," *id.* at 212, and arguing by analogy, they connect it to the Supreme Court's suggestion that Cal. Pub. Res. Code § 25524.2 would have been preempted if grounded on radiological safety concerns. In view of the Supreme Court's earlier assertion that the AEA nowhere expressly requires a state to construct or authorize nuclear powerplants, *id.* at 205, Plaintiffs argue that Va. Code Ann. § 45.1-283, although addressing a matter that the AEA does not, is preempted if the General Assembly enacted it out of concern for radiological safety.

Pacific Gas & Electric Co. is readily distinguishable from the present suit. Cal. Pub. Res. Code § 25524.2 regulated an activity that the AEA clearly committed to the NRC's regulatory authority – the construction of

a nuclear powerplant. *See* 42 U.S.C. § 2021(c)(1).[14] Because Cal. Pub. Res. Code § 25524.2 reached into a field under the NRC's regulatory authority, as expressly provided for by the AEA, it was necessary to determine the California statute's purpose. *See id.* § 2021(k). Here, the AEA is silent and confers no authority to the NRC respecting the activity or material on which the Commonwealth has asserted the right to act. Accordingly, there is no occasion to inquire into Va. Code Ann. § 45.1-283's purpose.

Even setting that distinction aside, by suggesting that Cal. Pub. Res. Code § 25524.2 would have been preempted if grounded in radiological safety concerns, the Supreme Court opined on a hypothetical statute not before it. This was dictum. *See id.* at 223-24 (Blackmun, J., concurring in part and concurring in judgment) ("Since the Court finds that California was not so motivated, this suggestion is unnecessary to

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[14] The Supreme Court's language seems at odds. After asserting that Cal. Pub. Res. Code § 25524.2 did not seek to regulate nuclear-powerplant construction, *Pac. Gas & Elec. Co.*, 461 U.S. at 212, the Supreme Court justified its inquiry into nonsafety rationale by characterizing the statute as "[a] state moratorium on nuclear construction . . . " and "[a] state prohibition on nuclear construction . . . ," *id.* at 213. Regardless whether the Supreme Court, in a select phrase, considered such a state moratorium or prohibition on nuclear-powerplant construction *not* to be a "regulation" of nuclear-powerplant construction, the competing language and pertinent statutes clarify how the Supreme Court reached the inquiry into statutory purpose and **why** that inquiry is immaterial here. *Cf.* 42 U.S.C. § 2021(c)(1); *Black's Law Dictionary* (10th ed. 2014) (defining "regulation" as "[c]ontrol over something by rule or restriction").

the Court's holding.");[15] *cf. English*, 496 U.S. at 84 n.7 (acknowledging the *Pacific Gas & Electric Co.* concurrence's observation but reserving decision whether the majority's suggestion was dictum). Rather than be betrayed into such an abstract analysis as extrapolating *Pacific Gas & Electric Co.*'s dicta and selecting among the opinion's (at times) seemingly-inconsistent language,[16] this Court will adhere to the surer conclusion by scrutinizing the statutes uniquely before it and addressing their interaction under intelligible and longstanding principles of preemption.

Plaintiffs also fail to cast Va. Code Ann. § 45.1-283 as intruding into the AEA's regulatory fields respecting byproduct materials, milling, or mill tailings' management. Va. Code Ann. § 45.1-283 directly prohibits a Virginia agency's acceptance of a permit application to mine uranium and, proximately, prevents conventional mining of nonfederal uranium deposits. The AEA regulates none of these activities or materials.[17] The

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[15] Although the Supreme Court asserted that the inquiry into nonsafety rationale was "necessary," *Pac. Gas & Elec. Co.*, 461 U.S. at 213, such an assertion "cannot transmute dictum into decision," *see United States v. Rubin*, 609 F.2d 51, 69 (2d Cir. 1979) (Friendly, J., concurring).

[16] It is notable, for instance, that the majority opinion "recognizes the limited nature of the federal role but then describes that role in more expansive terms." *Pacific Gas & Elec. Co.*, 461 U.S. at 224 n.1 (Blackmun, J., concurring in part and concurring in judgment) (citations omitted); *see also supra* note 14.

[17] The definition of "byproduct materials" includes neither a nonfederal uranium deposit nor any wastes from such a deposit's conventional mining. *See* 42 U.S.C. § 2014(e). Nor are those materials within definitions, for purposes of mill tailings' radiation

inability to conventionally mine a nonfederal uranium deposit might obviate one's decision to mill and manage the mill tailings on an active uranium-mining site; however, such a consequence is too far attenuated from the matter on which the General Assembly has asserted the right to act and on which Congress, by the AEA, has not.

2. Va. Code Ann. § 45.1-283 does not obstruct the realization of Congress' purposes and objectives behind the AEA.[18]

"Obstacle preemption is a type of conflict preemption. . . . It applies 'where state law stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress.'" *Columbia Venture, LLC v. Dewberry & Davis, LLC*, 604 F.3d 824, 829 (4th Cir.2010) (quoting *Freightliner Corp. v. Myrick*, 514 U.S. 280, 287 (1995)).

> What is a sufficient obstacle is a matter of judgment, to be informed by examining the federal statute as a whole and identifying its purpose and intended effects. A state law may pose an obstacle to federal purposes by interfering with the accomplishment of Congress's actual objectives, or by interfering with the

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control, of "residual radioactive material" or "tailings." *See id.* § 7911(7), (8).

[18] To whatever extent Plaintiffs claim conflict preemption's impossibility subset (*see* Compl. ¶ 110), it similarly fails. It is not the case that the AEA requires Plaintiffs to do one thing and Va. Code Ann. § 45.1-283, the opposite.

> methods that Congress selected for meeting those legislative goals.

PPL EnergyPlus, LLC, 753 F.3d at 478 (citations and internal quotation marks omitted). "In making this determination, a court 'should not seek out conflicts . . . where none clearly exists.'" *H & R Block E. Enters., Inc. v. Raskin*, 591 F.3d 718, 723 (4th Cir. 2010) (omission in original) (quoting *College Loan Corp. v. SLM Corp.*, 396 F.3d 588, 598 (4th Cir. 2005)); *see also English*, 496 U.S. at 90.

Plaintiffs contend that Va. Code Ann. § 45.1-283 conflicts with "a primary purpose of the [AEA] . . . the promotion of nuclear power." *Pac. Gas & Elec. Co.*, 461 U.S. at 221. They also assert that, by obviating potential on-site milling and mill-tailings management, Va. Code Ann. § 45.1-283 conflicts with Congress' judgment that those activities may proceed.[19] Congress has broadly stated a policy promoting atomic energy, *see* 42 U.S.C. § 2011, but it has evinced no purpose or objective that nonfederal uranium deposits be conventionally mined.[20] Congress has provided for the regulation of milling and mill tailings, *see id.* §§ 2014(e)(2), 2111-14; *id.* § 7901 et seq., but it has evinced no purpose or objective that nonfederal uranium deposits should be

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[19] Plaintiffs also contend that Va. Code Ann. § 45.1-283 reflects an attempt to avoid the AEA's discontinuance-and-assumption scheme. As explained, that scheme does not relate to the authority on which Va. Code Ann. § 45.1-283 rests. *See supra* pgs. 12-14.

[20] Should the NRC wish that a nonfederal uranium deposit be conventionally mined, it has unobstructed means for seeing that it occur. *See* 42 U.S.C. § 2096.

conventionally mined for milling's and mill-tailings management's on-site accompaniment. Va. Code Ann. § 45.1-283 does not, in any meaningful way, obstruct the realization of Congress' purposes and objectives behind the AEA.

CONCLUSION

The Governor, the two Cabinet Secretaries, and the DEQ officials are insufficiently connected to Va. Code Ann. § 45.1-283's implementation and, accordingly, are immune from suit. I will grant their Rule 12(b)(1) Motion to Dismiss. Because the AEA does not preempt Va. Code Ann. § 45.1-283, I will grant Defendants' Rule 12(b)(6) Motion to Dismiss. These dispositions moot Plaintiffs' Motion for Summary Judgment, and it will be denied as such.

The clerk is directed to forward a copy of this Memorandum Opinion and accompanying Order to all counsel of record.

Entered this 2nd day of December, 2015.

s/Jackson L. Kiser
SENIOR UNITED
STATES DISTRICT JUDGE

U.S. Const. art. VI, § 2

This Constitution, and the Laws of the United States which shall be made in Pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land; and the Judges in every State shall be bound thereby, any Thing in the Constitution or Laws of any State to the Contrary notwithstanding.

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42 U.S.C. § 2011
Congressional declaration of policy

Atomic energy is capable of application for peaceful as well as military purposes. It is therefore declared to be the policy of the United States that –

(a) the development, use, and control of atomic energy shall be directed so as to make the maximum contribution to the general welfare, subject at all times to the paramount objective of making the maximum contribution to the common defense and security; and

(b) the development, use, and control of atomic energy shall be directed so as to promote world peace, improve the general welfare, increase the standard of living, and strengthen free competition in private enterprise.

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42 U.S.C. § 2012
Congressional findings

The Congress of the United States makes the following findings concerning the development, use, and control of atomic energy:

(a) The development, utilization, and control of atomic energy for military and for all other purposes are vital to the common defense and security.

. . .

(c) The processing and utilization of source, byproduct, and special nuclear material affect interstate and foreign commerce and must be regulated in the national interest.

(d) The processing and utilization of source, byproduct, and special nuclear material must be regulated in the national interest and in order to provide for the common defense and security and to protect the health and safety of the public.

(e) Source and special nuclear material, production facilities, and utilization facilities are affected with the public interest, and regulation by the United States of the production and utilization of atomic energy and of the facilities used in connection therewith is necessary in the national interest to assure the common defense and security and to protect the health and safety of the public.

(f) The necessity for protection against possible interstate damage occurring from the operation of facilities for the production or utilization of source or special nuclear material places the operation of those facilities in interstate commerce for the purposes of this chapter.

(g) Funds of the United States may be provided for the development and use of atomic energy under conditions which will provide for the common defense and security and promote the general welfare.

. . .

(h) In order to protect the public and to encourage the development of the atomic energy industry, in the interest of the general welfare and of the common defense and security, the United States may make funds available for a portion of the damages suffered by the public from nuclear incidents, and may limit the liability of those persons liable for such losses.

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42 U.S.C. § 2013

Purpose of chapter

It is the purpose of this chapter to effectuate the policies set forth above by providing for –

(a) a program of conducting, assisting, and fostering research and development in order to encourage maximum scientific and industrial progress;

. . .

(c) a program for Government control of the possession, use, and production of atomic energy and special nuclear material, whether owned by the Government or others, so directed as to make the maximum contribution to the common defense and security and the national welfare, and to provide continued assurance of the Government's ability to enter into and enforce agreements with nations or groups of nations for the control of special nuclear materials and atomic weapons;

(d) a program to encourage widespread participation in the development and utilization of atomic energy for peaceful purposes to the maximum extent consistent with the common defense and security and with the health and safety of the public;

(e) a program of international cooperation to promote the common defense and security and to make available to cooperating nations the benefits of peaceful applications of atomic energy as widely as expanding technology and considerations of the common defense and security will permit. . . .

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42 U.S.C. § 2014

Definitions

The intent of Congress in the definitions as given in this section should be construed from the words or phrases used in the definitions. As used in this chapter:

. . .

(e) The term "byproduct material" means –

(1) any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material;

(2) the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content;

(3)(A) any discrete source of radium-226 that is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; or

(B) any material that –

(i) has been made radioactive by use of a particle accelerator; and

(ii) is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; and

(4) any discrete source of naturally occurring radioactive material, other than source material, that –

(A) the Commission, in consultation with the Administrator of the Environmental Protection Agency, the Secretary of Energy, the Secretary of Homeland Security, and the head of any other appropriate Federal agency, determines would pose a threat similar to the threat posed by a discrete

source of radium-226 to the public health and safety or the common defense and security; and

(B) before, on, or after August 8, 2005, is extracted or converted after extraction for use in a commercial, medical, or research activity.

. . .

(p) The term "licensed activity" means an activity licensed pursuant to this chapter and covered by the provisions of section 2210(a) of this title.

. . .

(u) The term "produce", when used in relation to special nuclear material, means (1) to manufacture, make, produce, or refine special nuclear material; (2) to separate special nuclear material from other substances in which such material may be contained; or (3) to make or to produce new special nuclear material.

(v) The term "production facility" means (1) any equipment or device determined by rule of the Commission to be capable of the production of special nuclear material in such quantity as to be of significance to the common defense and security, or in such manner as to affect the health and safety of the public; or (2) any important component part especially designed for such equipment or device as determined by the Commission. Except with respect to the export of a uranium enrichment production facility, such term as used in subchapters IX and XV of this division shall not include any equipment or device (or important component part especially designed for such equipment or

device) capable of separating the isotopes of uranium or enriching uranium in the isotope 235.

. . .

(z) The term "source material" means (1) uranium, thorium, or any other material which is determined by the Commission pursuant to the provisions of section 2091 of this title to be source material; or (2) ores containing one or more of the foregoing materials, in such concentration as the Commission may by regulation determine from time to time.

(aa) The term "special nuclear material" means (1) plutonium, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 2071 of this title, determines to be special nuclear material, but does not include source material; or (2) any material artificially enriched by any of the foregoing, but does not include source material.

. . .

(cc) The term "utilization facility" means (1) any equipment or device, except an atomic weapon, determined by rule of the Commission to be capable of making use of special nuclear material in such quantity as to be of significance to the common defense and security, or in such manner as to affect the health and safety of the public, or peculiarly adapted for making use of atomic energy in such quantity as to be of significance to the common defense and security, or in such manner as to affect the health and safety of the public;

or (2) any important component part especially designed for such equipment or device as determined by the Commission.

. . .

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42 U.S.C. § 2018

Agency jurisdiction

Nothing in this chapter shall be construed to affect the authority or regulations of any Federal, State, or local agency with respect to the generation, sale, or transmission of electric power produced through the use of nuclear facilities licensed by the Commission: *Provided*, That this section shall not be deemed to confer upon any Federal, State, or local agency any authority to regulate, control, or restrict any activities of the Commission.

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42 U.S.C. § 2021

Cooperation with States

(a) Purpose

It is the purpose of this section –

(1) to recognize the interests of the States in the peaceful uses of atomic energy, and to clarify the respective responsibilities under this chapter of the States and the Commission with respect to the

regulation of byproduct, source, and special nuclear materials;

(2) to recognize the need, and establish programs for, cooperation between the States and the Commission with respect to control of radiation hazards associated with use of such materials;

(3) to promote an orderly regulatory pattern between the Commission and State governments with respect to nuclear development and use and regulation of byproduct, source, and special nuclear materials;

(4) to establish procedures and criteria for discontinuance of certain of the Commission's regulatory responsibilities with respect to byproduct, source, and special nuclear materials, and the assumption thereof by the States;

(5) to provide for coordination of the development of radiation standards for the guidance of Federal agencies and cooperation with the States; and

(6) to recognize that, as the States improve their capabilities to regulate effectively such materials, additional legislation may be desirable.

(b) Agreements with States

Except as provided in subsection (c) of this section, the Commission is authorized to enter into agreements with the Governor of any State providing for discontinuance of the regulatory authority of the Commission under subchapters V, VI, and VII of this division, and

section 2201 of this title, with respect to any one or more of the following materials within the State:

(1) Byproduct materials (as defined in section 2014(e) of this title).

(2) Source materials.

(3) Special nuclear materials in quantities not sufficient to form a critical mass.

During the duration of such an agreement it is recognized that the State shall have authority to regulate the materials covered by the agreement for the protection of the public health and safety from radiation hazards.

(c) Commission regulation of certain activities

No agreement entered into pursuant to subsection (b) of this section shall provide for discontinuance of any authority and the Commission shall retain authority and responsibility with respect to regulation of –

(1) the construction and operation of any production or utilization facility or any uranium enrichment facility;

(2) the export from or import into the United States of byproduct, source, or special nuclear material, or of any production or utilization facility;

(3) the disposal into the ocean or sea of byproduct, source, or special nuclear waste materials as defined in regulations or orders of the Commission;

(4) the disposal of such other byproduct, source, or special nuclear material as the Commission determines by regulation or order should, because of the hazards or potential hazards thereof, not be so disposed of without a license from the Commission.

The Commission shall also retain authority under any such agreement to make a determination that all applicable standards and requirements have been met prior to termination of a license for byproduct material, as defined in section 2014(e)(2) of this title. Notwithstanding any agreement between the Commission and any State pursuant to subsection (b) of this section, the Commission is authorized by rule, regulation, or order to require that the manufacturer, processor, or producer of any equipment, device, commodity, or other product containing source, byproduct, or special nuclear material shall not transfer possession or control of such product except pursuant to a license issued by the Commission.

(d) Conditions

The Commission shall enter into an agreement under subsection (b) of this section with any State if –

(1) The Governor of that State certifies that the State has a program for the control of radiation hazards adequate to protect the public health and safety with respect to the materials within the State covered by the proposed agreement, and that the State desires to assume regulatory responsibility for such materials; and

(2) the Commission finds that the State program is in accordance with the requirements of subsection (o) of this section and in all other respects compatible with the Commission's program for the regulation of such materials, and that the State program is adequate to protect the public health and safety with respect to the materials covered by the proposed agreement.

(e) Publication in Federal Register; comment of interested persons

(1) Before any agreement under subsection (b) of this section is signed by the Commission, the terms of the proposed agreement and of proposed exemptions pursuant to subsection (f) of this section shall be published once each week for four consecutive weeks in the Federal Register; and such opportunity for comment by interested persons on the proposed agreement and exemptions shall be allowed as the Commission determines by regulation or order to be appropriate.

(2) Each proposed agreement shall include the proposed effective date of such proposed agreement or exemptions. The agreement and exemptions shall be published in the Federal Register within thirty days after signature by the Commission and the Governor.

(f) Exemptions

The Commission is authorized and directed, by regulation or order, to grant such exemptions from the licensing requirements contained in subchapters V, VI, and VII of this division, and from its regulations applicable

to licensees as the Commission finds necessary or appropriate to carry out any agreement entered into pursuant to subsection (b) of this section.

(g) Compatible radiation standards

The Commission is authorized and directed to cooperate with the States in the formulation of standards for protection against hazards of radiation to assure that State and Commission programs for protection against hazards of radiation will be coordinated and compatible.

(h) Consultative, advisory, and miscellaneous functions of Administrator of Environmental Protection Agency

The Administrator of the Environmental Protection Agency shall consult qualified scientists and experts in radiation matters, including the President of the National Academy of Sciences, the Chairman of the National Committee on Radiation Protection and Measurement, and qualified experts in the field of biology and medicine and in the field of health physics. The Special Assistant to the President for Science and Technology, or his designee, is authorized to attend meetings with, participate in the deliberations of, and to advise the Administrator. The Administrator shall advise the President with respect to radiation matters, directly or indirectly affecting health, including guidance for all Federal agencies in the formulation of radiation standards and in the establishment and execution of programs of cooperation with States. The

Administrator shall also perform such other functions as the President may assign to him by Executive order.

(i) Inspections and other functions; training and other assistance

The Commission in carrying out its licensing and regulatory responsibilities under this chapter is authorized to enter into agreements with any State, or group of States, to perform inspections or other functions on a cooperative basis as the Commission deems appropriate. The Commission is also authorized to provide training, with or without charge, to employees of, and such other assistance to, any State or political subdivision thereof or group of States as the Commission deems appropriate. Any such provision or assistance by the Commission shall take into account the additional expenses that may be incurred by a State as a consequence of the State's entering into an agreement with the Commission pursuant to subsection (b) of this section.

(j) Reserve power to terminate or suspend agreements; emergency situations; State nonaction on causes of danger; authority exercisable only during emergency and commensurate with danger

(1) The Commission, upon its own initiative after reasonable notice and opportunity for hearing to the State with which an agreement under subsection (b) of this section has become effective, or upon request of the Governor of such State, may terminate or suspend all or part of its agreement with the State and reassert the licensing and

regulatory authority vested in it under this chapter, if the Commission finds that (1) such termination or suspension is required to protect the public health and safety, or (2) the State has not complied with one or more of the requirements of this section. The Commission shall periodically review such agreements and actions taken by the States under the agreements to ensure compliance with the provisions of this section.

(2) The Commission, upon its own motion or upon request of the Governor of any State, may, after notifying the Governor, temporarily suspend all or part of its agreement with the State without notice or hearing if, in the judgment of the Commission:

> (A) an emergency situation exists with respect to any material covered by such an agreement creating danger which requires immediate action to protect the health or safety of persons either within or outside the State, and
>
> (B) the State has failed to take steps necessary to contain or eliminate the cause of the danger within a reasonable time after the situation arose.

A temporary suspension under this paragraph shall remain in effect only for such time as the emergency situation exists and shall authorize the Commission to exercise its authority only to the extent necessary to contain or eliminate the danger.

(k) State regulation of activities for certain purposes

Nothing in this section shall be construed to affect the authority of any State or local agency to regulate activities for purposes other than protection against radiation hazards.

(l) Commission regulated activities; notice of filing; hearing

With respect to each application for Commission license authorizing an activity as to which the Commission's authority is continued pursuant to subsection (c) of this section, the Commission shall give prompt notice to the State or States in which the activity will be conducted of the filing of the license application; and shall afford reasonable opportunity for State representatives to offer evidence, interrogate witnesses, and advise the Commission as to the application without requiring such representatives to take a position for or against the granting of the application.

(m) Limitation of agreements and exemptions

No agreement entered into under subsection (b) of this section, and no exemption granted pursuant to subsection (f) of this section, shall affect the authority of the Commission under section 2201(b) or (i) of this title to issue rules, regulations, or orders to protect the common defense and security, to protect restricted data or to guard against the loss or diversion of special nuclear material. For purposes of section 2201(i) of this title, activities covered by exemptions granted pursuant to

subsection (f) of this section shall be deemed to constitute activities authorized pursuant to this chapter; and special nuclear material acquired by any person pursuant to such an exemption shall be deemed to have been acquired pursuant to section 2073 of this title.

. . .

(o) State compliance requirements: compliance with section 2113(b) of this title and health and environmental protection standards; procedures for licenses, rulemaking, and license impact analysis; amendment of agreements for transfer of State collected funds; proceedings duplication restriction; alternative requirements

In the licensing and regulation of byproduct material, as defined in section 2014(e)(2) of this title, or of any activity which results in the production of byproduct material as so defined under an agreement entered into pursuant to subsection (b) of this section, a State shall require –

(1) compliance with the requirements of subsection (b) of section 2113 of this title (respecting ownership of byproduct material and land), and

(2) compliance with standards which shall be adopted by the State for the protection of the public health, safety, and the environment from hazards associated with such material which are equivalent, to the extent practicable, or more stringent than, standards adopted and enforced by the Commission for the same purpose, including requirements and standards promulgated by the

Commission and the Administrator of the Environmental Protection Agency pursuant to sections 2113, 2114, and 2022 of this title, and

(3) procedures which –

(A) in the case of licenses, provide procedures under State law which include –

(i) an opportunity, after public notice, for written comments and a public hearing, with a transcript,

(ii) an opportunity for cross examination, and

(iii) a written determination which is based upon findings included in such determination and upon the evidence presented during the public comment period and which is subject to judicial review;

(B) in the case of rulemaking, provide an opportunity for public participation through written comments or a public hearing and provide for judicial review of the rule;

(C) require for each license which has a significant impact on the human environment a written analysis (which shall be available to the public before the commencement of any such proceedings) of the impact of such license, including any activities conducted pursuant thereto, on the environment, which analysis shall include –

(i) an assessment of the radiological and nonradiological impacts to the public

health of the activities to be conducted pursuant to such license;

(ii) an assessment of any impact on any waterway and groundwater resulting from such activities;

(iii) consideration of alternatives, including alternative sites and engineering methods, to the activities to be conducted pursuant to such license; and

(iv) consideration of the long-term impacts, including decommissioning, decontamination, and reclamation impacts, associated with activities to be conducted pursuant to such license, including the management of any byproduct material, as defined by section 2014(e)(2) of this title; and

(D) prohibit any major construction activity with respect to such material prior to complying with the provisions of subparagraph (C).

If any State under such agreement imposes upon any licensee any requirement for the payment of funds to such State for the reclamation or long-term maintenance and monitoring of such material, and if transfer to the United States of such material is required in accordance with section 2113(b) of this title, such agreement shall be amended by the Commission to provide that such State shall transfer to the United States upon termination of the license issued to such licensee the total amount collected by such State from such licensee for such purpose. If such payments are

required, they must be sufficient to ensure compliance with the standards established by the Commission pursuant to section 2201(x) of this title. No State shall be required under paragraph (3) to conduct proceedings concerning any license or regulation which would duplicate proceedings conducted by the Commission. In adopting requirements pursuant to paragraph (2) of this subsection with respect to sites at which ores are processed primarily for their source material content or which are used for the disposal of byproduct material as defined in section 2014(e)(2) of this title, the State may adopt alternatives (including, where appropriate, site-specific alternatives) to the requirements adopted and enforced by the Commission for the same purpose if, after notice and opportunity for public hearing, the Commission determines that such alternatives will achieve a level of stabilization and containment of the sites concerned, and a level of protection for public health, safety, and the environment from radiological and nonradiological hazards associated with such sites, which is equivalent to, to the extent practicable, or more stringent than the level which would be achieved by standards and requirements adopted and enforced by the Commission for the same purpose and any final standards promulgated by the Administrator of the Environmental Protection Agency in accordance with section 2022 of this title. Such alternative State requirements may take into account local or regional conditions, including geology, topography, hydrology and meteorology.

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42 U.S.C. § 2022

Health and environmental standards for uranium mill tailings

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(b) Promulgation and revision of rules for protection from hazards at processing or disposal sites

(1) As soon as practicable, but not later than October 31, 1982, the Administrator shall, by rule, propose, and within 11 months thereafter promulgate in final form, standards of general application for the protection of the public health, safety, and the environment from radiological and nonradiological hazards associated with the processing and with the possession, transfer, and disposal of byproduct material, as defined in section 2014(e)(2) of this title, at sites at which ores are processed primarily for their source material content or which are used for the disposal of such byproduct material. If the Administrator fails to promulgate standards in final form under this subsection by October 1, 1983, the authority of the Administrator to promulgate such standards shall terminate, and the Commission may take actions under this chapter without regard to any provision of this chapter requiring such actions to comply with, or be taken in accordance with, standards promulgated by the Administrator. In any such case, the Commission shall promulgate, and from time to time revise, any such standards of general application which the Commission deems necessary to carry out its responsibilities in the conduct of its licensing activities under this chapter. Requirements established by the Commission under this

chapter with respect to byproduct material as defined in section 2014(e)(2) of this title shall conform to such standards. Any requirements adopted by the Commission respecting such byproduct material before promulgation by the Commission of such standards shall be amended as the Commission deems necessary to conform to such standards in the same manner as provided in subsection (f)(3) of this section. . . . In establishing such standards, the Administrator shall consider the risk to the public health, safety, and the environment, the environmental and economic costs of applying such standards, and such other factors as the Administrator determines to be appropriate.

(2) Such generally applicable standards promulgated pursuant to this subsection for nonradiological hazards shall provide for the protection of human health and the environment consistent with the standards required under subtitle C of the Solid Waste Disposal Act, as amended [42 U.S.C.A. § 6921 et seq.], which are applicable to such hazards: *Provided, however*, That no permit issued by the Administrator is required under this chapter or the Solid Waste Disposal Act, as amended [42 U.S.C.A. § 6901 et seq.], for the processing, possession, transfer, or disposal of byproduct material, as defined in section 2014(e)(2) of this title. The Administrator may periodically revise any standard promulgated pursuant to this subsection. Within three years after such revision of any such standard, the Commission and any State permitted to exercise authority under section 2021(b)(2) of this title shall apply such revised standard in the case of any license for byproduct

material as defined in section 2014(e)(2) of this title or any revision thereof.

(c) Publication in Federal Register; notice and hearing; consultations; judicial review; time for petition; venue; copy to Administrator; record; administrative jurisdiction; review by Supreme Court; effective date of rule

(1) Before the promulgation of any rule pursuant to this section, the Administrator shall publish the proposed rule in the Federal Register, together with a statement of the research, analysis, and other available information in support of such proposed rule, and provide a period of public comment of at least thirty days for written comments thereon and an opportunity, after such comment period and after public notice, for any interested person to present oral data, views, and arguments at a public hearing. There shall be a transcript of any such hearing. The Administrator shall consult with the Commission and the Secretary of Energy before promulgation of any such rule.

(2) Judicial review of any rule promulgated under this section may be obtained by any interested person only upon such person filing a petition for review within sixty days after such promulgation in the United States court of appeals for the Federal judicial circuit in which such person resides or has his principal place of business. A copy of the petition shall be forthwith transmitted by the clerk of court to the Administrator. The Administrator thereupon shall file in the court the written submissions to, and transcript of, the written or oral proceedings on which such rule was based as

chapter with respect to byproduct material as defined in section 2014(e)(2) of this title shall conform to such standards. Any requirements adopted by the Commission respecting such byproduct material before promulgation by the Commission of such standards shall be amended as the Commission deems necessary to conform to such standards in the same manner as provided in subsection (f)(3) of this section. . . . In establishing such standards, the Administrator shall consider the risk to the public health, safety, and the environment, the environmental and economic costs of applying such standards, and such other factors as the Administrator determines to be appropriate.

(2) Such generally applicable standards promulgated pursuant to this subsection for nonradiological hazards shall provide for the protection of human health and the environment consistent with the standards required under subtitle C of the Solid Waste Disposal Act, as amended [42 U.S.C.A. § 6921 et seq.], which are applicable to such hazards: *Provided, however*, That no permit issued by the Administrator is required under this chapter or the Solid Waste Disposal Act, as amended [42 U.S.C.A. § 6901 et seq.], for the processing, possession, transfer, or disposal of byproduct material, as defined in section 2014(e)(2) of this title. The Administrator may periodically revise any standard promulgated pursuant to this subsection. Within three years after such revision of any such standard, the Commission and any State permitted to exercise authority under section 2021(b)(2) of this title shall apply such revised standard in the case of any license for byproduct

material as defined in section 2014(e)(2) of this title or any revision thereof.

(c) Publication in Federal Register; notice and hearing; consultations; judicial review; time for petition; venue; copy to Administrator; record; administrative jurisdiction; review by Supreme Court; effective date of rule

(1) Before the promulgation of any rule pursuant to this section, the Administrator shall publish the proposed rule in the Federal Register, together with a statement of the research, analysis, and other available information in support of such proposed rule, and provide a period of public comment of at least thirty days for written comments thereon and an opportunity, after such comment period and after public notice, for any interested person to present oral data, views, and arguments at a public hearing. There shall be a transcript of any such hearing. The Administrator shall consult with the Commission and the Secretary of Energy before promulgation of any such rule.

(2) Judicial review of any rule promulgated under this section may be obtained by any interested person only upon such person filing a petition for review within sixty days after such promulgation in the United States court of appeals for the Federal judicial circuit in which such person resides or has his principal place of business. A copy of the petition shall be forthwith transmitted by the clerk of court to the Administrator. The Administrator thereupon shall file in the court the written submissions to, and transcript of, the written or oral proceedings on which such rule was based as

provided in section 2112 of Title 28. The court shall have jurisdiction to review the rule in accordance with chapter 7 of Title 5 and to grant appropriate relief as provided in such chapter. The judgment of the court affirming, modifying, or setting aside, in whole or in part, any such rule shall be final, subject to judicial review by the Supreme Court of the United States upon certiorari or certification as provided in section 1254 of Title 28.

(3) Any rule promulgated under this section shall not take effect earlier than sixty calendar days after such promulgation.

(d) Federal and State implementation and enforcement

Implementation and enforcement of the standards promulgated pursuant to subsection (b) of this section shall be the responsibility of the Commission in the conduct of its licensing activities under this chapter. States exercising authority pursuant to section 2021(b)(2) of this title shall implement and enforce such standards in accordance with subsection (o) of such section.

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42 U.S.C. § 2023

State authority to regulate radiation below level of regulatory concern of Nuclear Regulatory Commission

(a) In general

No provision of this chapter, or of the Low-Level Radioactive Waste Policy Act [42 U.S.C.A. § 2021b et seq.], may be construed to prohibit or otherwise restrict the authority of any State to regulate, on the basis of radiological hazard, the disposal or off-site incineration of low-level radioactive waste, if the Nuclear Regulatory Commission, after October 24, 1992, exempts such waste from regulation.

(b) Relation to other State authority

This section may not be construed to imply preemption of existing State authority. Except as expressly provided in subsection (a) of this section, this section may not be construed to confer on any State any additional authority to regulate activities licensed by the Nuclear Regulatory Commission.

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42 U.S.C. § 2091

Determination of source material

The Commission may determine from time to time that other material is source material in addition to those specified in the definition of source material. Before

making such determination, the Commission must find that such material is essential to the production of special nuclear material and must find that the determination that such material is source material is in the interest of the common defense and security, and the President must have expressly assented in writing to the determination. The Commission's determination, together with the assent of the President, shall be submitted to the Energy Committees and a period of thirty days shall elapse while Congress is in session (in computing such thirty days, there shall be excluded the days on which either House is not in session because of an adjournment of more than three days) before the determination of the Commission may become effective: *Provided, however*, That the Energy Committees, after having received such determination, may by resolution in writing waive the conditions of or all or any portion of such thirty-day period.

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42 U.S.C. § 2092

License requirements for transfers

Unless authorized by a general or specific license issued by the Commission, which the Commission is authorized to issue, no person may transfer or receive in interstate commerce, transfer, deliver, receive possession of or title to, or import into or export from the United States any source material after removal from its place of deposit in nature, except that licenses shall

not be required for quantities of source material which, in the opinion of the Commission, are unimportant.

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42 U.S.C. § 2093

Domestic distribution of source material

(a) License

The Commission is authorized to issue licenses for and to distribute source material within the United States to qualified applicants requesting such material –

(1) for the conduct of research and development activities of the types specified in section 2051 of this title;

(2) for use in the conduct of research and development activities or in medical therapy under a license issued pursuant to section 2134 of this title;

(3) for use under a license issued pursuant to section 2133 of this title; or

(4) for any other use approved by the Commission as an aid to science or industry.

(b) Minimum criteria for licenses

The Commission shall establish, by rule, minimum criteria for the issuance of specific or general licenses for the distribution of source material depending upon the degree of importance to the common defense and security or to the health and safety of the public of –

(1) the physical characteristics of the source material to be distributed;

(2) the quantities of source material to be distributed; and

(3) the intended use of the source material to be distributed.

(c) Determination of charges

The Commission may make a reasonable charge determined pursuant to section 2201(m) of this title for the source material licensed and distributed under subsection (a)(1), (a)(2), or (a)(4) of this section and shall make a reasonable charge determined pursuant to section 2201(m) of this title, for the source material licensed and distributed under subsection (a)(3) of this section. The Commission shall establish criteria in writing for the determination of whether a charge will be made for the source material licensed and distributed under subsection (a)(1), (a)(2), or (a)(4) of this section, considering, among other things, whether the licensee is a nonprofit or eleemosynary institution and the purposes for which the source material will be used.

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42 U.S.C. § 2094

Foreign distribution of source material

The Commission is authorized to cooperate with any nation by distributing source material and to distribute source material pursuant to the terms of an agreement for cooperation to which such nation is a party and which is made in accordance with section 2153 of

this title. The Commission is also authorized to distribute source material outside of the United States upon a determination by the Commission that such activity will not be inimical to the interests of the United States. The authority to distribute source material under this section other than under an export license granted by the Nuclear Regulatory Commission shall in no case extend to quantities of source material in excess of three metric tons per year per recipient.

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42 U.S.C. § 2095

Reports

The Commission is authorized to issue such rules, regulations, or orders requiring reports of ownership, possession, extraction, refining, shipment, or other handling of source material as it may deem necessary, except that such reports shall not be required with respect to (a) any source material prior to removal from its place of deposit in nature, or (b) quantities of source material which in the opinion of the Commission are unimportant or the reporting of which will discourage independent prospecting for new deposits.

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42 U.S.C. § 2096

Acquisition of source material; payments

The Commission is authorized and directed, to the extent it deems necessary to effectuate the provisions of this chapter –

(a) to purchase, take, requisition, condemn, or otherwise acquire supplies of source material;

(b) to purchase, condemn, or otherwise acquire any interest in real property containing deposits of source material; and

(c) to purchase, condemn, or otherwise acquire rights to enter upon any real property deemed by the Commission to have possibilities of containing deposits of source material in order to conduct prospecting and exploratory operations for such deposits.

Any purchase made under this section may be made without regard to the provisions of section 6101 of Title 41, upon certification by the Commission that such action is necessary in the interest of the common defense and security, or upon a showing by the Commission that advertising is not reasonably practicable. Partial and advanced payments may be made under contracts for such purposes. The Commission may establish guaranteed prices for all source material delivered to it within a specified time. Just compensation shall be made for any right, property, or interest in property taken, requisitioned, condemned, or otherwise acquired under this section.

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42 U.S.C. § 2097

Operations on lands belonging to United States

The Commission is authorized, to the extent it deems necessary to effectuate the provisions of this chapter, to issue leases or permits for prospecting for, exploration for, mining of, or removal of deposits of source material in lands belonging to the United States: *Provided, however*, That notwithstanding any other provisions of law, such leases or permits may be issued for lands administered for national park, monument, and wildlife purposes only when the President by Executive Order declares that the requirements of the common defense and security make such action necessary.

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42 U.S.C. § 2099

Prohibitions against issuance of license

The Commission shall not license any person to transfer or deliver, receive possession of or title to, or import into or export from the United States any source material if, in the opinion of the Commission, the issuance of a license to such person for such purpose would be inimical to the common defense and security or the health and safety of the public.

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42 U.S.C. § 2111

Domestic distribution

(a) In general

No person may transfer or receive in interstate commerce, manufacture, produce, transfer, acquire, own, possess, import, or export any byproduct material, except to the extent authorized by this section, section 2112 or section 2114 of this title. The Commission is authorized to issue general or specific licenses to applicants seeking to use byproduct material for research or development purposes, for medical therapy, industrial uses, agricultural uses, or such other useful applications as may be developed. The Commission may distribute, sell, loan, or lease such byproduct material as it owns to qualified applicants with or without charge: *Provided, however*, That, for byproduct material to be distributed by the Commission for a charge, the Commission shall establish prices on such equitable basis as, in the opinion of the Commission, (a) will provide reasonable compensation to the Government for such material, (b) will not discourage the use of such material or the development of sources of supply of such material independent of the Commission, and (c) will encourage research and development. In distributing such material, the Commission shall give preference to applicants proposing to use such material either in the conduct of research and development or in medical therapy. The Commission shall not permit the distribution of any byproduct material to any licensee, and shall recall or order the recall of any

distributed material from any licensee, who is not equipped to observe or who fails to observe such safety standards to protect health as may be established by the Commission or who uses such material in violation of law or regulation of the Commission or in a manner other than as disclosed in the application therefor or approved by the Commission. The Commission is authorized to establish classes of byproduct material and to exempt certain classes or quantities of material or kinds of uses or users from the requirements for a license set forth in this section when it makes a finding that the exemption of such classes or quantities of such material or such kinds of uses or users will not constitute an unreasonable risk to the common defense and security and to the health and safety of the public.

(b) Requirements

(1) In general

Except as provided in paragraph (2), byproduct material, as defined in paragraphs (3) and (4) of section 2014(e) of this title, may only be transferred to and disposed of in a disposal facility that –

(A) is adequate to protect public health and safety; and

(B)(i) is licensed by the Commission; or

(ii) is licensed by a State that has entered into an agreement with the Commission under section 2021(b) of this title, if the licensing requirements of the State are compatible with the licensing requirements of the Commission.

(2) Effect of subsection

Nothing in this subsection affects the authority of any entity to dispose of byproduct material, as defined in paragraphs (3) and (4) of section 2014(e) of this title, at a disposal facility in accordance with any Federal or State solid or hazardous waste law, including the Solid Waste Disposal Act (42 U.S.C. 6901 et seq.).

(c) Treatment as low-level radioactive waste

Byproduct material, as defined in paragraphs (3) and (4) of section 2014(e) of this title, disposed of under this section shall not be considered to be low-level radioactive waste for the purposes of –

(1) section 2 of the Low-Level Radioactive Waste Policy Act (42 U.S.C. 2021b); or

(2) carrying out a compact that is –

(A) entered into in accordance with that Act (42 U.S.C. 2021b et seq.); and

(B) approved by Congress.

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42 U.S.C. § 2112

Foreign distribution of byproduct material

(a) Cooperation with other Nations

The Commission is authorized to cooperate with any nation by distributing byproduct material, and to distribute byproduct material, pursuant to the terms of an agreement for cooperation to which such nation is

party and which is made in accordance with section 2153 of this title.

(b) Distribution to individuals

The Commission is also authorized to distribute byproduct material to any person outside the United States upon application therefor by such person and demand such charge for such material as would be charged for the material if it were distributed within the United States: *Provided, however*, That the Commission shall not distribute any such material to any person under this section if, in its opinion, such distribution would be inimical to the common defense and security: *And provided further*, That the Commission may require such reports regarding the use of material distributed pursuant to the provisions of this section as it deems necessary.

(c) Distributor's license

The Commission is authorized to license others to distribute byproduct material to any person outside the United States under the same conditions, except as to charges, as would be applicable if the material were distributed by the Commission.

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42 U.S.C. § 2113

Ownership and custody of certain byproduct material and disposal sites

(a) Specific assurances in license for pretermination actions

Any license issued or renewed after the effective date of this section under section 2092 or section 2111 of this title for any activity which results in the production of any byproduct material, as defined in section 2014(e)(2) of this title, shall contain such terms and conditions as the Commission determines to be necessary to assure that, prior to termination of such license –

(1) the licensee will comply with decontamination, decommissioning, and reclamation standards prescribed by the Commission for sites (A) at which ores were processed primarily for their source material content and (B) at which such byproduct material is deposited, and

(2) ownership of any byproduct material, as defined in section 2014(e)(2) of this title, which resulted from such licensed activity shall be transferred to (A) the United States or (B) in the State in which such activity occurred if such State exercises the option under subsection (b)(1) of this section to acquire land used for the disposal of byproduct material.

Any license which is in effect on the effective date of this section and which is subsequently terminated

without renewal shall comply with paragraphs (1) and (2) upon termination.

(b) Transfer of title; health and environmental protection through maintenance of property and materials; use of surface or subsurface estates; first refusal rights of transferor; maintenance, monitoring, and emergency measures and other authorized action; licensee-transferor liability for fraud or negligence; administrative and legal costs limitation; government retransfers under section 7914(h) of this title

(1)(A) The Commission shall require by rule, regulation, or order that prior to the termination of any license which is issued after the effective date of this section, title to the land, including any interests therein (other than land owned by the United States or by a State) which is used for the disposal of any byproduct material, as defined by section 2014(e)(2) of this title, pursuant to such license shall be transferred to –

(i) the United States, or

(ii) the State in which such land is located, at the option of such State,

unless the Commission determines prior to such termination that transfer of title to such land and such byproduct material is not necessary or desirable to protect the public health, safety, or welfare or to minimize or eliminate danger to life or property. Such determination shall be made in accordance with section 2231 of this title. Notwithstanding any other provision of law or any such determination, such property and materials shall

be maintained pursuant to a license issued by the Commission pursuant to section 2111 of this title in such manner as will protect the public health, safety, and the environment.

(B) If the Commission determines by order that use of the surface or subsurface estates, or both, of the land transferred to the United States or to a State under subparagraph (A) would not endanger the public health, safety, welfare, or environment, the Commission, pursuant to such regulations as it may prescribe, shall permit the use of the surface or subsurface estates, or both, of such land in a manner consistent with the provisions of this section. If the Commission permits such use of such land, it shall provide the person who transferred such land with the right of first refusal with respect to such use of such land.

(2) If transfer to the United States of title to such byproduct material and such land is required under this section, the Secretary of Energy or any Federal agency designated by the President shall, following the Commission's determination of compliance under subsection (c) of this section, assume title and custody of such byproduct material and land transferred as provided in this subsection. Such Secretary or Federal agency shall maintain such material and land in such manner as will protect the public health and safety and the environment. Such custody may be transferred to another officer or instrumentality of the United States only upon approval of the President.

(3) If transfer to a State of title to such byproduct material is required in accordance with this

subsection, such State shall, following the Commission's determination of compliance under subsection (d) of this section, assume title and custody of such byproduct material and land transferred as provided in this subsection. Such State shall maintain such material and land in such manner as will protect the public health, safety, and the environment.

(4) In the case of any such license under section 2092 of this title, which was in effect on the effective date of this section, the Commission may require, before the termination of such license, such transfer of land and interests therein (as described in paragraph (1) of this subsection) to the United States or a State in which such land is located, at the option of such State, as may be necessary to protect the public health, welfare, and the environment from any effects associated with such byproduct material. In exercising the authority of this paragraph, the Commission shall take into consideration the status of the ownership of such land and interests therein and the ability of the licensee to transfer title and custody thereof to the United States or a State.

(5) The Commission may, pursuant to a license, or by rule or order, require the Secretary or other Federal agency or State having custody of such property and materials to undertake such monitoring, maintenance, and emergency measures as are necessary to protect the public health and safety and such other actions as the Commission deems necessary to comply with the standards promulgated pursuant to section 2114 of this title. The Secretary or such other Federal agency is

authorized to carry out maintenance, monitoring, and emergency measures, but shall take no other action pursuant to such license, rule or order, with respect to such property and materials unless expressly authorized by Congress after November 8, 1978.

(6) The transfer of title to land or byproduct materials, as defined in section 2014(e)(2) of this title, to a State or the United States pursuant to this subsection shall not relieve any licensee of liability for any fraudulent or negligent acts done prior to such transfer.

(7) Material and land transferred to the United States or a State in accordance with this subsection shall be transferred without cost to the United States or a State (other than administrative and legal costs incurred in carrying out such transfer). Subject to the provisions of paragraph (1)(B) of this subsection, the United States or a State shall not transfer title to material or property acquired under this subsection to any person, unless such transfer is in the same manner as provided under section 7914(h) of this title.

(8) The provisions of this subsection respecting transfer of title and custody to land shall not apply in the case of lands held in trust by the United States for any Indian tribe or lands owned by such Indian tribe subject to a restriction against alienation imposed by the United States. In the case of such lands which are used for the disposal of byproduct material, as defined in section 2014(e)(2) of this title, the licensee shall be required to enter

into such arrangements with the Commission as may be appropriate to assure the long-term maintenance and monitoring of such lands by the United States.

(c) Compliance with applicable standards and license requirements; determination upon termination of license

Upon termination on[1] any license to which this section applies, the Commission shall determine whether or not the licensee has complied with all applicable standards and requirements under such license.

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42 U.S.C. § 2114

Authorities of Commission respecting certain byproduct material

(a) Management function

The Commission shall insure that the management of any byproduct material, as defined in section 2014(e)(2) of this title, is carried out in such manner as –

(1) the Commission deems appropriate to protect the public health and safety and the environment from radiological and non-radiological hazards associated with the processing and with the possession and transfer of such material, taking into account the risk to the public health, safety, and the environment, with due consideration of the

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[1] So in original. Probably should be "of".

economic costs and such other factors as the Commission determines to be appropriate,,[1]

(2) conforms with applicable general standards promulgated by the Administrator of the Environmental Protection Agency under section 2022 of this title, and

(3) conforms to general requirements established by the Commission, with the concurrence of the Administrator, which are, to the maximum extent practicable, at least comparable to requirements applicable to the possession, transfer, and disposal of similar hazardous material regulated by the Administrator under the Solid Waste Disposal Act, as amended [42 U.S.C.A. § 6901 et seq.].

(b) Rules, regulations, or orders for certain activities; civil penalty

In carrying out its authority under this section, the Commission is authorized to –

(1) by rule, regulation, or order require persons, officers, or instrumentalities exempted from licensing under section 2111 of this title to conduct monitoring, perform remedial work, and to comply with such other measures as it may deem necessary or desirable to protect health or to minimize danger to life or property, and in connection with the disposal or storage of such byproduct material; and

(2) make such studies and inspections and to conduct such monitoring as may be necessary.

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[1] So in original.

Any violation by any person other than the United States or any officer or employee of the United States or a State of any rule, regulation, or order or licensing provision, of the Commission established under this section or section 2113 of this title shall be subject to a civil penalty in the same manner and in the same amount as violations subject to a civil penalty under section 2282 of this title. Nothing in this section affects any authority of the Commission under any other provision of this chapter.

(c) Alternative requirements or proposals

In the case of sites at which ores are processed primarily for their source material content or which are used for the disposal of byproduct material as defined in section 2014(e)(2) of this title, a licensee may propose alternatives to specific requirements adopted and enforced by the Commission under this chapter. Such alternative proposals may take into account local or regional conditions, including geology, topography, hydrology and meteorology. The Commission may treat such alternatives as satisfying Commission requirements if the Commission determines that such alternatives will achieve a level of stabilization and containment of the sites concerned, and a level of protection for public health, safety, and the environment from radiological and nonradiological hazards associated with such sites, which is equivalent to, to the extent practicable, or more stringent than the level which would be achieved by standards and requirements adopted and enforced by the Commission for the same purpose and any final standards promulgated by the

Administrator of the Environmental Protection Agency in accordance with section 2022 of this title.

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42 U.S.C. § 2210b

Uranium supply

(a) Assessment of domestic uranium industry viability; monitoring and reporting requirements; criteria; implementation by rules and regulations

The Secretary of Energy shall monitor and for the years 1983 to 1992 report annually to the Congress and to the President a determination of the viability of the domestic uranium mining and milling industry and shall establish by rule, after public notice and in accordance with the requirements of section 2231 of this title, within 9 months of January 4, 1983, specific criteria which shall be assessed in the annual reports on the domestic uranium industry's viability. The Secretary of Energy is authorized to issue regulations providing for the collection of such information as the Secretary of Energy deems necessary to carry out the monitoring and reporting requirements of this section.

. . .

(c) Criteria for monitoring and reporting requirements

The criteria referred to in subsection (a) of this section shall also include, but not be limited to –

(1) an assessment of whether executed contracts or options for source material or special nuclear material will result in greater than 37 ½ percent of actual or projected domestic uranium requirements for any two-consecutive-year period being supplied by source material or special nuclear material from foreign sources;

(2) projections of uranium requirements and inventories of domestic utilities for a 10 year period;

(3) present and probable future use of the domestic market by foreign imports;

(4) whether domestic economic reserves can supply all future needs for a future 10 year period;

(5) present and projected domestic uranium exploration expenditures and plans;

(6) present and projected employment and capital investment in the uranium industry;

(7) the level of domestic uranium production capacity sufficient to meet projected domestic nuclear power needs for a 10 year period; and

(8) a projection of domestic uranium production and uranium price levels which will be in effect under various assumptions with respect to imports.

(d) Excessive imports; investigation by United States International Trade Commission

The Secretary or[1] Energy, at any time, may determine on the basis of the monitoring and annual reports required under this section that source material or special nuclear material from foreign sources is being imported in such increased quantities as to be a substantial cause of serious injury, or threat thereof, to the United States uranium mining and milling industry. Based on that determination, the United States Trade Representative shall request that the United States International Trade Commission initiate an investigation under section 2251 of Title 19.

(e) Excessive imports for contracts or options as threatening national security; investigation by Secretary of Commerce; recommendation for further investigation

(1) If, during the period 1982 to 1992, the Secretary of Energy determines that executed contracts or options for source material or special nuclear material from foreign sources for use in utilization facilities within or under the jurisdiction of the United States represent greater than 37 ½ percent of actual or projected domestic uranium requirements for any two-consecutive-year period, or if the Secretary of Energy determines the level of contracts or options involving source material and special nuclear material from foreign sources may threaten to impair the national security, the Secretary of Energy shall request the Secretary of Commerce to initiate under section 1862 of Title 19 an investigation to determine the effects on the

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[1] So in original. Probably should be "of".

national security of imports of source material and special nuclear material. The Secretary of Energy shall cooperate fully with the Secretary of Commerce in carrying out such an investigation and shall make available to the Secretary of Commerce the findings that lead to this request and such other information that will assist the Secretary of Commerce in the conduct of the investigation.

(2) The Secretary of Commerce shall, in the conduct of any investigation requested by the Secretary of Energy pursuant to this section, take into account any information made available by the Secretary of Energy, including information regarding the impact on national security of projected or executed contracts or options for source material or special nuclear material from foreign sources or whether domestic production capacity is sufficient to supply projected national security requirements.

(3) No sooner than 3 years following completion of any investigation by the Secretary of Commerce under paragraph (1), if no recommendation has been made pursuant to such study for trade adjustments to assist or protect domestic uranium production, the Secretary of Energy may initiate a request for another such investigation by the Secretary of Commerce.

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42 U.S.C. § 2210i

Secure transfer of nuclear materials

(a) The Commission shall establish a system to ensure that materials described in subsection (b) of this section, when transferred or received in the United States by any party pursuant to an import or export license issued pursuant to this chapter, are accompanied by a manifest describing the type and amount of materials being transferred or received. Each individual receiving or accompanying the transfer of such materials shall be subject to a security background check conducted by appropriate Federal entities.

(b) Except as otherwise provided by the Commission by regulation, the materials referred to in subsection (a) of this section are byproduct materials, source materials, special nuclear materials, high-level radioactive waste, spent nuclear fuel, transuranic waste, and low-level radioactive waste (as defined in section 10101(16) of this title).

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42 U.S.C. § 2296b

Overfeed program

(a) Uranium purchases

To the maximum extent permitted by sound business practice, the Corporation shall purchase uranium in accordance with subsection (b) of this section and overfeed it into the enrichment process to reduce the amount of power required to produce the enriched uranium

ordered by enrichment services customers, taking into account costs associated with depleted tailings.

(b) Use of domestic uranium

Uranium purchased by the Corporation for purposes of this section shall be of domestic origin and purchased from domestic uranium producers to the extent permitted under the multilateral trade agreements (as defined in section 3501(4) of Title 19) and the North American Free Trade Agreement.

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42 U.S.C. § 2296b-1

National Strategic Uranium Reserve

There is hereby established the National Strategic Uranium Reserve under the direction and control of the Secretary. The Reserve shall consist of natural uranium and uranium equivalents contained in stockpiles or inventories currently held by the United States for defense purposes. Effective on October 24, 1992, and for 6 years thereafter, use of the Reserve shall be restricted to military purposes and government research. Use of the Department of Energy's stockpile of enrichment tails existing on October 24, 1992, shall be restricted to military purposes for 6 years thereafter.

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42 U.S.C. § 2296b-2

Sale of remaining DOE inventories

The Secretary, after making the transfer required under section 2297c-6 of this title, may sell, from time to time, portions of the remaining inventories of raw or low-enriched uranium of the Department that are not necessary to national security needs, to the Corporation, at a fair market price. Sales under this section may be made only if such sales will not have a substantial adverse impact on the domestic uranium mining industry. Proceeds from sales under this subsection shall be deposited into the general fund of the United States Treasury.

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42 U.S.C. § 2296b-3

Responsibility for the industry

(a) Continuing Secretarial responsibility

The Secretary shall have a continuing responsibility for the domestic uranium industry to encourage the use of domestic uranium. The Secretary, in fulfilling this responsibility, shall not use any supervisory authority over the Corporation. The Secretary shall report annually to the appropriate committees of Congress on action taken with respect to the domestic uranium industry, including action to promote the export of domestic uranium pursuant to subsection (b) of this section.

(b) Encourage export

The Department, with the cooperation of the Department of Commerce, the United States Trade Representative and other governmental organizations, shall encourage the export of domestic uranium. Within 180 days after October 24, 1992, the Secretary shall develop recommendations and implement government programs to promote the export of domestic uranium.

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42 U.S.C. § 2296b-4

Annual uranium purchase reports

(a) In general

By January 1 of each year, the owner or operator of any civilian nuclear power reactor shall report to the Secretary, acting through the Administrator of the Energy Information Administration, for activities of the previous fiscal year –

(1) the country of origin and the seller of any uranium or enriched uranium purchased or imported into the United States either directly or indirectly by such owner or operator; and

(2) the country of origin and the seller of any enrichment services purchased by such owner or operator.

(b) Congressional access

The information provided to the Secretary pursuant to this section shall be made available to the Congress by March 1 of each year.

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42 U.S.C. § 2296b-6

Regulatory treatment of uranium purchases

(a) Encouragement

The Secretary shall encourage States and utility regulatory authorities to take into consideration the achievement of the objectives and purposes of this part, including the national need to avoid dependence on imports, when considering whether to allow the owner or operator of any electric power plant to recover in its rates and charges to customers any cost of purchase of domestic uranium, enriched uranium, or enrichment services from a non-affiliated seller greater than the cost of non-domestic uranium, enriched uranium or enrichment services.

(b) Report

Within 1 year after October 24, 1992, and annually thereafter, the Secretary shall report to the Congress on the progress of the Secretary in encouraging actions by State regulatory authorities pursuant to subsection (a) of this section. Such report shall include detailed information on programs initiated by the Secretary to encourage appropriate State regulatory action and

recommendations, if any, on further action that could be taken by the Secretary, other Federal agencies, or the Congress in order to further the purposes of this part.

(c) Savings provision

This section may not be construed to authorize the Secretary to take any action in violation of the multilateral trade agreements (as defined in section 3501(4) of Title 19) or the North American Free Trade Agreement.

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42 U.S.C. § 2296b-7

Definitions

For purposes of this part:

(1) The term "Corporation" means the United States Enrichment Corporation established under section 2297b of this title or its successor.

. . .

(3) The term "domestic origin" refers to any uranium that has been mined in the United States including uranium recovered from uranium deposits in the United States by underground mining, open-pit mining, strip mining, in situ recovery, leaching, and ion recovery, or recovered from phosphoric acid manufactured in the United States.

(4) The term "domestic uranium producer" means a person or entity who produces domestic uranium and who has, to the extent required by State and

Federal agencies having jurisdiction, licenses and permits for the operation, decontamination, decommissioning, and reclamation of sites, structures and equipment.

. . .

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10 C.F.R. Pt. 40, App. A

Criteria Relating to the Operation of Uranium Mills and the Disposition of Tailings or Wastes Produced by the Extraction or Concentration of Source Material From Ores Processed Primarily for Their Source Material Content

Introduction. Every applicant for a license to possess and use source material in conjunction with uranium or thorium milling, or byproduct material at sites formerly associated with such milling, is required by the provisions of § 40.31(h) to include in a license application proposed specifications relating to milling operations and the disposition of tailings or wastes resulting from such milling activities. This appendix establishes technical, financial, ownership, and long-term site surveillance criteria relating to the siting, operation, decontamination, decommissioning, and reclamation of mills and tailings or waste systems and sites at which such mills and systems are located. As used in this appendix, the term "as low as is reasonably achievable" has the same meaning as in § 20.1003 of this chapter.

In many cases, flexibility is provided in the criteria to allow achieving an optimum tailings disposal program

on a site-specific basis. However, in such cases the objectives, technical alternatives and concerns which must be taken into account in developing a tailings program are identified. As provided by the provisions of § 40.31(h) applications for licenses must clearly demonstrate how the criteria have been addressed.

The specifications must be developed considering the expected full capacity of tailings or waste systems and the lifetime of mill operations. Where later expansions of systems or operations may be likely (for example, where large quantities of ore now marginally uneconomical may be stockpiled), the amenability of the disposal system to accommodate increased capacities without degradation in long-term stability and other performance factors must be evaluated.

Licensees or applicants may propose alternatives to the specific requirements in this appendix. The alternative proposals may take into account local or regional conditions, including geology, topography, hydrology, and meterology. The Commission may find that the proposed alternatives meet the Commission's requirements if the alternatives will achieve a level of stabilization and containment of the sites concerned, and a level of protection for public health, safety, and the environment from radiological and nonradiological hazards associated with the sites, which is equivalent to, to the extent practicable, or more stringent than the level which would be achieved by the requirements of this Appendix and the standards promulgated by the Environmental Protection Agency in 40 CFR part 192, subparts D and E.

All site specific licensing decisions based on the criteria in this appendix or alternatives proposed by licensees or applicants will take into account the risk to the public health and safety and the environment with due consideration to the economic costs involved and any other factors the Commission determines to be appropriate. In implementing this appendix, the Commission will consider "practicable" and "reasonably achievable" as equivalent terms. Decisions involved [sic] these terms will take into account the state of technology, and the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations, and in relation to the utilization of atomic energy in the public interest.

The following definitions apply to the specified terms as used in this appendix:

Aquifer means a geologic formation, group of formations, or part of a formation capable of yielding a significant amount of ground water to wells or springs. Any saturated zone created by uranium or thorium recovery operations would not be considered an aquifer unless the zone is or potentially is (1) hydraulically interconnected to a natural aquifer, (2) capable of discharge to surface water, or (3) reasonably accessible because of migration beyond the vertical projection of the boundary of the land transferred for long-term government ownership and care in accordance with Criterion 11 of this appendix.

As expeditiously as practicable considering technological feasibility, for the purposes of Criterion 6A, means as quickly as possible considering: the physical characteristics of the tailings and the site; the limits of available technology; the need for consistency with mandatory requirements of other regulatory programs; and factors beyond the control of the licensee. The phrase permits consideration of the cost of compliance only to the extent specifically provided for by use of the term available technology.

Available technology means technologies and methods for emplacing a final radon barrier on uranium mill tailings piles or impoundments. This term shall not be construed to include extraordinary measures or techniques that would impose costs that are grossly excessive as measured by practice within the industry (or one that is reasonably analogous), (such as, by way of illustration only, unreasonable overtime, staffing, or transportation requirements, etc., considering normal practice in the industry; laser fusion of soils, etc.), provided there is reasonable progress toward emplacement of the final radon barrier. To determine grossly excessive costs, the relevant baseline against which cost shall be compared is the cost estimate for tailings impoundment closure contained in the licensee's approved reclamation plan, but costs beyond these estimates shall not automatically be considered grossly excessive.

Closure means the activities following operations to decontaminate and decommission the buildings and

site used to produce byproduct materials and reclaim the tailings and/or waste disposal area.

Closure plan means the Commission approved plan to accomplish closure.

Compliance period begins when the Commission sets secondary ground-water protection standards and ends when the owner or operator's license is terminated and the site is transferred to the State or Federal agency for long-term care.

Dike means an embankment or ridge of either natural or man-made materials used to prevent the movement of liquids, sludges, solids or other materials.

Disposal area means the area containing byproduct materials to which the requirements of Criterion 6 apply.

Existing portion means that land surface area of an existing surface impoundment on which significant quantities of uranium or thorium byproduct materials had been placed prior to September 30, 1983.

Factors beyond the control of the licensee means factors proximately causing delay in meeting the schedule in the applicable reclamation plan for the timely emplacement of the final radon barrier notwithstanding the good faith efforts of the licensee to complete the barrier in compliance with paragraph (1) of Criterion 6A. These factors may include, but are not limited to –

(1) Physical conditions at the site;

(2) Inclement weather or climatic conditions;

(3) An act of God;

(4) An act of war;

(5) A judicial or administrative order or decision, or change to the statutory, regulatory, or other legal requirements applicable to the licensee's facility that would preclude or delay the performance of activities required for compliance;

(6) Labor disturbances;

(7) Any modifications, cessation or delay ordered by State, Federal, or local agencies;

(8) Delays beyond the time reasonably required in obtaining necessary government permits, licenses, approvals, or consent for activities described in the reclamation plan proposed by the licensee that result from agency failure to take final action after the licensee has made a good faith, timely effort to submit legally sufficient applications, responses to requests (including relevant data requested by the agencies), or other information, including approval of the reclamation plan; and

(9) An act or omission of any third party over whom the licensee has no control.

Final radon barrier means the earthen cover (or approved alternative cover) over tailings or waste constructed to comply with Criterion 6 of this appendix (excluding erosion protection features).

Ground water means water below the land surface in a zone of saturation. For purposes of this appendix,

ground water is the water contained within an aquifer as defined above.

Leachate means any liquid, including any suspended or dissolved components in the liquid, that has percolated through or drained from the byproduct material.

Licensed site means the area contained within the boundary of a location under the control of persons generating or storing byproduct materials under a Commission license.

Liner means a continuous layer of natural or man-made materials, beneath or on the sides of a surface impoundment which restricts the downward or lateral escape of byproduct material, hazardous constituents, or leachate.

Milestone means an action or event that is required to occur by an enforceable date.

Operation means that a uranium or thorium mill tailings pile or impoundment is being used for the continued placement of byproduct material or is in standby status for such placement. A pile or impoundment is in operation from the day that byproduct material is first placed in the pile or impoundment until the day final closure begins.

Point of compliance is the site specific location in the uppermost aquifer where the ground-water protection standard must be met.

Reclamation plan, for the purposes of Criterion 6A, means the plan detailing activities to accomplish reclamation of the tailings or waste disposal area in accordance with the technical criteria of this appendix. The reclamation plan must include a schedule for reclamation milestones that are key to the completion of the final radon barrier including as appropriate, but not limited to, wind blown tailings retrieval and placement on the pile, interim stabilization (including dewatering or the removal of freestanding liquids and recontouring), and final radon barrier construction. (Reclamation of tailings must also be addressed in the closure plan; the detailed reclamation plan may be incorporated into the closure plan.)

Surface impoundment means a natural topographic depression, man-made excavation, or diked area, which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and which is not an injection well.

Uppermost aquifer means the geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically interconnected with this aquifer within the facility's property boundary.

I. Technical Criteria

Criterion 1 – The general goal or broad objective in siting and design decisions is permanent isolation of tailings and associated contaminants by minimizing disturbance and dispersion by natural forces, and to do

so without ongoing maintenance. For practical reasons, specific siting decisions and design standards must involve finite times (e.g., the longevity design standard in Criterion 6). The following site features which will contribute to such a goal or objective must be considered in selecting among alternative tailings disposal sites or judging the adequacy of existing tailings sites:

Remoteness from populated areas;

Hydrologic and other natural conditions as they contribute to continued immobilization and isolation of contaminants from ground-water sources; and

Potential for minimizing erosion, disturbance, and dispersion by natural forces over the long term.

The site selection process must be an optimization to the maximum extent reasonably achievable in terms of these features.

In the selection of disposal sites, primary emphasis must be given to isolation of tailings or wastes, a matter having long-term impacts, as opposed to consideration only of short-term convenience or benefits, such as minimization of transportation or land acquisition costs. While isolation of tailings will be a function of both site and engineering design, overriding consideration must be given to siting features given the long-term nature of the tailings hazards.

Tailings should be disposed of in a manner that no active maintenance is required to preserve conditions of the site.

Criterion 2 – To avoid proliferation of small waste disposal sites and thereby reduce perpetual surveillance obligations, byproduct material from in situ extraction operations, such as residues from solution evaporation or contaminated control processes, and wastes from small remote above ground extraction operations must be disposed of at existing large mill tailings disposal sites; unless, considering the nature of the wastes, such as their volume and specific activity, and the costs and environmental impacts of transporting the wastes to a large disposal site, such offsite disposal is demonstrated to be impracticable or the advantages of onsite burial clearly outweigh the benefits of reducing the perpetual surveillance obligations.

Criterion 3 – The "prime option" for disposal of tailings is placement below grade, either in mines or specially excavated pits (that is, where the need for any specially constructed retention structure is eliminated). The evaluation of alternative sites and disposal methods performed by mill operators in support of their proposed tailings disposal program (provided in applicants' environmental reports) must reflect serious consideration of this disposal mode. In some instances, below grade disposal may not be the most environmentally sound approach, such as might be the case if a groundwater formation is relatively close to the surface or not very well isolated by overlying soils and rock. Also, geologic and topographic conditions might make full below grade burial impracticable: For example, bedrock may be sufficiently near the surface that blasting would be required to excavate a disposal pit at

excessive cost, and more suitable alternative sites are not available. Where full below grade burial is not practicable, the size of retention structures, and size and steepness of slopes associated exposed embankments must be minimized by excavation to the maximum extent reasonably achievable or appropriate given the geologic and hydrologic conditions at a site. In these cases, it must be demonstrated that an above grade disposal program will provide reasonably equivalent isolation of the tailings from natural erosional forces.

Criterion 4 – The following site and design criteria must be adhered to whether tailings or wastes are disposed of above or below grade.

(a) Upstream rainfall catchment areas must be minimized to decrease erosion potential and the size of the floods which could erode or wash out sections of the tailings disposal area.

(b) Topographic features should provide good wind protection.

(c) Embankment and cover slopes must be relatively flat after final stabilization to minimize erosion potential and to provide conservative factors of safety assuring long-term stability. The broad objective should be to contour final slopes to grades which are as close as possible to those which would be provided if tailings were disposed of below grade; this could, for example, lead to slopes of about 10 horizontal to 1 vertical (10h:1v) or less steep. In general, slopes should not be steeper than about 5h:1v. Where steeper slopes are

proposed, reasons why a slope less steep than 5h:1v would be impracticable should be provided, and compensating factors and conditions which make such slopes acceptable should be identified.

(d) A full self-sustaining vegetative cover must be established or rock cover employed to reduce wind and water erosion to negligible levels.

Where a full vegetative cover is not likely to be self-sustaining due to climatic or other conditions, such as in semi-arid and arid regions, rock cover must be employed on slopes of the impoundment system. The NRC will consider relaxing this requirement for extremely gentle slopes such as those which may exist on the top of the pile.

The following factors must be considered in establishing the final rock cover design to avoid displacement of rock particles by human and animal traffic or by natural process, and to preclude undercutting and piping:

Shape, size, composition, and gradation of rock particles (excepting bedding material average particle size must be at least cobble size or greater);

Rock cover thickness and zoning of particles by size; and

Steepness of underlying slopes.

Individual rock fragments must be dense, sound, and resistant to abrasion, and must be free from cracks, seams, and other defects that would tend to unduly

increase their destruction by water and frost actions. Weak, friable, or laminated aggregate may not be used.

Rock covering of slopes may be unnecessary where top covers are very thick (on the order of 10 m or greater); impoundment slopes are very gentle (on the order of 10 h:1v or less); bulk cover materials have inherently favorable erosion resistance characteristics; and, there is negligible drainage catchment area upstream of the pile and good wind protection as described in points (a) and (b) of this Criterion.

Furthermore, all impoundment surfaces must be contoured to avoid areas of concentrated surface runoff or abrupt or sharp changes in slope gradient. In addition to rock cover on slopes, areas toward which surface runoff might be directed must be well protected with substantial rock cover (rip rap). In addition to providing for stability of the impoundment system itself, overall stability, erosion potential, and geomorphology of surrounding terrain must be evaluated to assure that there are not ongoing or potential processes, such as gully erosion, which would lead to impoundment instability.

(e) The impoundment may not be located near a capable fault that could cause a maximum credible earthquake larger than that which the impoundment could reasonably be expected to withstand. As used in this criterion, the term "capable fault" has the same meaning as defined in section III(g) of appendix A of 10 CFR part 100. The term "maximum credible earthquake" means that earthquake which would cause the

maximum vibratory ground motion based upon an evaluation of earthquake potential considering the regional and local geology and seismology and specific characteristics of local subsurface material.

(f) The impoundment, where feasible, should be designed to incorporate features which will promote deposition. For example, design features which promote deposition of sediment suspended in any runoff which flows into the impoundment area might be utilized; the object of such a design feature would be to enhance the thickness of cover over time.

Criterion 5 – Criteria 5A-5D and new Criterion 13 incorporate the basic ground-water protection standards imposed by the Environmental Protection Agency in 40 CFR part 192, subparts D and E (48 FR 45926; October 7, 1983) which apply during operations and prior to the end of closure. Ground-water monitoring to comply with these standards is required by Criterion 7A.

5A(1) – The primary ground-water protection standard is a design standard for surface impoundments used to manage uranium and thorium byproduct material. Unless exempted under paragraph 5A(3) of this criterion, surface impoundments (except for an existing portion) must have a liner that is designed, constructed, and installed to prevent any migration of wastes out of the impoundment to the adjacent subsurface soil, ground water, or surface water at any time during the active life (including the closure period) of the impoundment. The liner may be constructed of materials that may allow wastes to migrate into the liner (but

not into the adjacent subsurface soil, ground water, or surface water) during the active life of the facility, provided that impoundment closure includes removal or decontamination of all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate. For impoundments that will be closed with the liner material left in place, the liner must be constructed of materials that can prevent wastes from migrating into the liner during the active life of the facility.

5A(2) – The liner required by paragraph 5A(1) above must be –

(a) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation;

(b) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift; and

(c) Installed to cover all surrounding earth likely to be in contact with the wastes or leachate.

5A(3) – The applicant or licensee will be exempted from the requirements of paragraph 5A(1) of this

criterion if the Commission finds, based on a demonstration by the applicant or licensee, that alternate design and operating practices, including the closure plan, together with site characteristics will prevent the migration of any hazardous constituents into ground water or surface water at any future time. . . .

5A(4) – A surface impoundment must be designed, constructed, maintained, and operated to prevent overtopping resulting from normal or abnormal operations, overfilling, wind and wave actions, rainfall, or run-on; from malfunctions of level controllers, alarms, and other equipment; and from human error.

5A(5) – When dikes are used to form the surface impoundment, the dikes must be designed, constructed, and maintained with sufficient structural integrity to prevent massive failure of the dikes. In ensuring structural integrity, it must not be presumed that the liner system will function without leakage during the active life of the impoundment.

5B(1) – Uranium and thorium byproduct materials must be managed to conform to the following secondary ground-water protection standard: Hazardous constituents entering the ground water from a licensed site must not exceed the specified concentration limits in the uppermost aquifer beyond the point of compliance during the compliance period. Hazardous constituents are those constituents identified by the Commission pursuant to paragraph 5B(2) of this criterion. Specified concentration limits are those limits

established by the Commission as indicated in paragraph 5B(5) of this criterion. The Commission will also establish the point of compliance and compliance period on a site specific basis through license conditions and orders. The objective in selecting the point of compliance is to provide the earliest practicable warning that the impoundment is releasing hazardous constituents to the ground water. The point of compliance must be selected to provide prompt indication of groundwater contamination on the hydraulically downgradient edge of the disposal area. The Commission shall identify hazardous constituents, establish concentration limits, set the compliance period, and may adjust the point of compliance if needed to accord with developed data and site information as to the flow of ground water or contaminants, when the detection monitoring established under Criterion 7A indicates leakage of hazardous constituents from the disposal area.

. . .

5B(5) – At the point of compliance, the concentration of a hazardous constituent must not exceed –

(a) The Commission approved background concentration of that constituent in the ground water;

(b) The respective value given in the table in paragraph 5C if the constituent is listed in the table and if the background level of the constituent is below the value listed; or

(c) An alternate concentration limit established by the Commission.

. . .

5D – If the ground-water protection standards established under paragraph 5B(1) of this criterion are exceeded at a licensed site, a corrective action program must be put into operation as soon as is practicable, and in no event later than eighteen (18) months after the Commission finds that the standards have been exceeded. The licensee shall submit the proposed corrective action program and supporting rationale for Commission approval prior to putting the program into operation, unless otherwise directed by the Commission. The objective of the program is to return hazardous constituent concentration levels in ground water to the concentration limits set as standards. The licensee's proposed program must address removing the hazardous constituents that have entered the ground water at the point of compliance or treating them in place. The program must also address removing or treating in place any hazardous constituents that exceed concentration limits in ground water between the point of compliance and the downgradient facility property boundary. The licensee shall continue corrective action measures to the extent necessary to achieve and maintain compliance with the ground-water protection standard. The Commission will determine when the licensee may terminate corrective action measures based on data from the ground-water monitoring program and other information that provide reasonable assurance that the ground-water protection standard will not be exceeded.

5E – In developing and conducting ground-water protection programs, applicants and licensees shall also consider the following:

(1) Installation of bottom liners (Where synthetic liners are used, a leakage detection system must be installed immediately below the liner to ensure major failures are detected if they occur. This is in addition to the ground-water monitoring program conducted as provided in Criterion 7. Where clay liners are proposed or relatively thin, in-situ clay soils are to be relied upon for seepage control, tests must be conducted with representative tailings solutions and clay materials to confirm that no significant deterioration of permeability or stability properties will occur with continuous exposure of clay to tailings solutions. Tests must be run for a sufficient period of time to reveal any effects if they are going to occur (in some cases deterioration has been observed to occur rather rapidly after about nine months of exposure)).

(2) Mill process designs which provide the maximum practicable recycle of solutions and conservation of water to reduce the net input of liquid to the tailings impoundment.

(3) Dewatering of tailings by process devices and/or in-situ drainage systems (At new sites, tailings must be dewatered by a drainage system installed at the bottom of the impoundment to lower the phreatic surface and reduce the driving head of seepage, unless tests show tailings are not amenable to such a system.

Where in-situ dewatering is to be conducted, the impoundment bottom must be graded to assure that the drains are at a low point. The drains must be protected by suitable filter materials to assure that drains remain free running. The drainage system must also be adequately sized to assure good drainage).

(4) Neutralization to promote immobilization of hazardous constituents.

5F – Where ground-water impacts are occurring at an existing site due to seepage, action must be taken to alleviate conditions that lead to excessive seepage impacts and restore ground-water quality. The specific seepage control and ground-water protection method, or combination of methods, to be used must be worked out on a site-specific basis. Technical specifications must be prepared to control installation of seepage control systems. A quality assurance, testing, and inspection program, which includes supervision by a qualified engineer or scientist, must be established to assure the specifications are met.

5G – In support of a tailings disposal system proposal, the applicant/operator shall supply information concerning the following:

(1) The chemical and radioactive characteristics of the waste solutions.

(2) The characteristics of the underlying soil and geologic formations particularly as they will control transport of contaminants and solutions. This includes

detailed information concerning extent, thickness, uniformity, shape, and orientation of underlying strata. Hydraulic gradients and conductivities of the various formations must be determined. This information must be gathered from borings and field survey methods taken within the proposed impoundment area and in surrounding areas where contaminants might migrate to ground water. The information gathered on boreholes must include both geologic and geophysical logs in sufficient number and degree of sophistication to allow determining significant discontinuities, fractures, and channeled deposits of high hydraulic conductivity. If field survey methods are used, they should be in addition to and calibrated with borehole logging. Hydrologic parameters such as permeability may not be determined on the basis of laboratory analysis of samples alone; a sufficient amount of field testing (e.g., pump tests) must be conducted to assure actual field properties are adequately understood. Testing must be conducted to allow estimating chemi-sorption attenuation properties of underlying soil and rock.

(3) Location, extent, quality, capacity and current uses of any ground water at and near the site.

5H – Steps must be taken during stockpiling of ore to minimize penetration of radionuclides into underlying soils; suitable methods include lining and/or compaction of ore storage areas.

Criterion 6 – (1) In disposing of waste byproduct material, licensees shall place an earthen cover (or approved alternative) over tailings or wastes at the end

of milling operations and shall close the waste disposal area in accordance with a design[1] which provides reasonable assurance of control of radiological hazards to (i) be effective for 1,000 years, to the extent reasonably achievable, and, in any case, for at least 200 years, and (ii) limit releases of radon-222 from uranium byproduct materials, and radon-220 from thorium byproduct materials, to the atmosphere so as not to exceed an average[2] release rate of 20 picocuries per square meter per second (pCi/m^{2}s) to the extent practicable throughout the effective design life determined pursuant to (1)(i) of this Criterion. In computing required tailings cover thicknesses, moisture in soils in excess of amounts found normally in similar soils in similar circumstances may not be considered. Direct gamma exposure from the tailings or wastes should be reduced to background levels. The effects of any thin synthetic layer may not be taken into account in determining the calculated radon exhalation level. If non-soil materials are proposed as cover materials, it must be demonstrated that these materials will not crack or degrade

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[1] In the case of thorium byproduct materials, the standard applies only to design. Monitoring for radon emissions from thorium byproduct materials after installation of an appropriately designed cover is not required.

[2] This average applies to the entire surface of each disposal area over a period of at least one year, but a period short compared to 100 years. Radon will come from both byproduct materials and from covering materials. Radon emissions from covering materials should be estimated as part of developing a closure plan for each site. The standard, however, applies only to emissions from byproduct materials to the atmosphere.

by differential settlement, weathering, or other mechanism, over long-term intervals.

(2) As soon as reasonably achievable after emplacement of the final cover to limit releases of radon-222 from uranium byproduct material and prior to placement of erosion protection barriers or other features necessary for long-term control of the tailings, the licensee shall verify through appropriate testing and analysis that the design and construction of the final radon barrier is effective in limiting releases of radon-222 to a level not exceeding 20 pCi/m^{2}s averaged over the entire pile or impoundment using the procedures described in 40 CFR part 61, appendix B, Method 115, or another method of verification approved by the Commission as being at least as effective in demonstrating the effectiveness of the final radon barrier.

(3) When phased emplacement of the final radon barrier is included in the applicable reclamation plan, the verification of radon-222 release rates required in paragraph (2) of this criterion must be conducted for each portion of the pile or impoundment as the final radon barrier for that portion is emplaced.

(4) Within ninety days of the completion of all testing and analysis relevant to the required verification in paragraphs (2) and (3) of this criterion, the uranium mill licensee shall report to the Commission the results detailing the actions taken to verify that levels of release of radon-222 do not exceed 20 pCi/m^{2}s when averaged over the entire pile or impoundment. The licensee shall maintain records until termination of the

license documenting the source of input parameters including the results of all measurements on which they are based, the calculations and/or analytical methods used to derive values for input parameters, and the procedure used to determine compliance. These records shall be kept in a form suitable for transfer to the custodial agency at the time of transfer of the site to DOE or a State for long-term care if requested.

(5) Near surface cover materials (i.e., within the top three meters) may not include waste or rock that contains elevated levels of radium; soils used for near surface cover must be essentially the same, as far as radioactivity is concerned, as that of surrounding surface soils. This is to ensure that surface radon exhalation is not significantly above background because of the cover material itself.

(6) The design requirements in this criterion for longevity and control of radon releases apply to any portion of a licensed and/or disposal site unless such portion contains a concentration of radium in land, averaged over areas of 100 square meters, which, as a result of byproduct material, does not exceed the background level by more than: (i) 5 picocuries per gram (pCi/g) of radium-226, or, in the case of thorium byproduct material, radium-228, averaged over the first 15 centimeters (cm) below the surface, and (ii) 15 pCi/g of radium-226, or, in the case of thorium byproduct material, radium-228, averaged over 15-cm thick layers more than 15 cm below the surface.

Byproduct material containing concentrations of radionuclides other than radium in soil, and surface activity on remaining structures, must not result in a total effective dose equivalent (TEDE) exceeding the dose from cleanup of radium contaminated soil to the above standard (benchmark dose), and must be at levels which are as low as is reasonably achievable. If more than one residual radionuclide is present in the same 100-square-meter area, the sum of the ratios for each radionuclide of concentration present to the concentration limit will not exceed "1" (unity). A calculation of the potential peak annual TEDE within 1000 years to the average member of the critical group that would result from applying the radium standard (not including radon) on the site must be submitted for approval. The use of decommissioning plans with benchmark doses which exceed 100 mrem/yr, before application of ALARA, requires the approval of the Commission after consideration of the recommendation of the NRC staff. This requirement for dose criteria does not apply to sites that have decommissioning plans for soil and structures approved before June 11, 1999.

(7) The licensee shall also address the nonradiological hazards associated with the wastes in planning and implementing closure. The licensee shall ensure that disposal areas are closed in a manner that minimizes the need for further maintenance. To the extent necessary to prevent threats to human health and the environment, the licensee shall control, minimize, or eliminate post-closure escape of nonradiological hazardous constituents, leachate, contaminated

rainwater, or waste decomposition products to the ground or surface waters or to the atmosphere.

Criterion 6A – (1) For impoundments containing uranium byproduct materials, the final radon barrier must be completed as expeditiously as practicable considering technological feasibility after the pile or impoundment ceases operation in accordance with a written, Commission-approved reclamation plan. (The term as expeditiously as practicable considering technological feasibility as specifically defined in the Introduction of this appendix includes factors beyond the control of the licensee.) Deadlines for completion of the final radon barrier and, if applicable, the following interim milestones must be established as a condition of the individual license: windblown tailings retrieval and placement on the pile and interim stabilization (including dewatering or the removal of freestanding liquids and recontouring). The placement of erosion protection barriers or other features necessary for long-term control of the tailings must also be completed in a timely manner in accordance with a written, Commission-approved reclamation plan.

. . .

Criterion 7 – At least one full year prior to any major site construction, a preoperational monitoring program must be conducted to provide complete baseline data on a milling site and its environs. Throughout the construction and operating phases of the mill, an operational monitoring program must be conducted to

measure or evaluate compliance with applicable standards and regulations; to evaluate performance of control systems and procedures; to evaluate environmental impacts of operation; and to detect potential long-term effects.

7A – The licensee shall establish a detection monitoring program needed for the Commission to set the site-specific ground-water protection standards in paragraph 5B(1) of this appendix. For all monitoring under this paragraph the licensee or applicant will propose for Commission approval as license conditions which constituents are to be monitored on a site specific basis. A detection monitoring program has two purposes. The initial purpose of the program is to detect leakage of hazardous constituents from the disposal area so that the need to set ground-water protection standards is monitored. If leakage is detected, the second purpose of the program is to generate data and information needed for the Commission to establish the standards under Criterion 5B. The data and information must provide a sufficient basis to identify those hazardous constituents which require concentration limit standards and to enable the Commission to set the limits for those constituents and the compliance period. They may also need to provide the basis for adjustments to the point of compliance. For licenses in effect September 30, 1983, the detection monitoring programs must have been in place by October 1, 1984. For licenses issued after September 30, 1983, the detection monitoring programs must be in place when

specified by the Commission in orders or license conditions. Once ground-water protection standards have been established pursuant to paragraph 5B(1), the licensee shall establish and implement a compliance monitoring program. The purpose of the compliance monitoring program is to determine that the hazardous constituent concentrations in ground water continue to comply with the standards set by the Commission. In conjunction with a corrective action program, the licensee shall establish and implement a corrective action monitoring program. The purpose of the corrective action monitoring program is to demonstrate the effectiveness of the corrective actions. Any monitoring program required by this paragraph may be based on existing monitoring programs to the extent the existing programs can meet the stated objective for the program.

Criterion 8 – Milling operations must be conducted so that all airborne effluent releases are reduced to levels as low as is reasonably achievable. The primary means of accomplishing this must be by means of emission controls. Institutional controls, such as extending the site boundary and exclusion area, may be employed to ensure that offsite exposure limits are met, but only after all practicable measures have been taken to control emissions at the source. Notwithstanding the existence of individual dose standards, strict control of emissions is necessary to assure that population exposures are reduced to the maximum extent reasonably achievable and to avoid site contamination. The greatest potential sources of offsite radiation exposure

(aside from radon exposure) are dusting from dry surfaces of the tailings disposal area not covered by tailings solution and emissions from yellowcake drying and packaging operations. During operations and prior to closure, radiation doses from radon emissions from surface impoundments of uranium or thorium byproduct materials must be kept as low as is reasonably achievable.

Checks must be made and logged hourly of all parameters (e.g., differential pressures and scrubber water flow rates) that determine the efficiency of yellowcake stack emission control equipment operation. The licensee shall retain each log as a record for three years after the last entry in the log is made. It must be determined whether or not conditions are within a range prescribed to ensure that the equipment is operating consistently near peak efficiency; corrective action must be taken when performance is outside of prescribed ranges. Effluent control devices must be operative at all times during drying and packaging operations and whenever air is exhausting from the yellowcake stack. Drying and packaging operations must terminate when controls are inoperative. When checks indicate the equipment is not operating within the range prescribed for peak efficiency, actions must be taken to restore parameters to the prescribed range. When this cannot be done without shutdown and repairs, drying and packaging operations must cease as soon as practicable. Operations may not be restarted after cessation due to off-normal performance until needed corrective actions have been identified and implemented.

All these cessations, corrective actions, and restarts must be reported to the appropriate NRC regional office as indicated in Criterion 8A, in writing, within ten days of the subsequent restart.

To control dusting from tailings, that portion not covered by standing liquids must be wetted or chemically stabilized to prevent or minimize blowing and dusting to the maximum extent reasonably achievable. This requirement may be relaxed if tailings are effectively sheltered from wind, such as may be the case where they are disposed of below grade and the tailings surface is not exposed to wind. Consideration must be given in planning tailings disposal programs to methods which would allow phased covering and reclamation of tailings impoundments because this will help in controlling particulate and radon emissions during operation. To control dusting from diffuse sources, such as tailings and ore pads where automatic controls do not apply, operators shall develop written operating procedures specifying the methods of control which will be utilized.

Milling operations producing or involving thorium byproduct material must be conducted in such a manner as to provide reasonable assurance that the annual dose equivalent does not exceed 25 millirems to the whole body, 75 millirems to the thyroid, and 25 millirems to any other organ of any member of the public as a result of exposures to the planned discharge of radioactive materials, radon-220 and its daughters excepted, to the general environment.

Uranium and thorium byproduct materials must be managed so as to conform to the applicable provisions of title 40 of the Code of Federal Regulations, part 440, "Ore Mining and Dressing Point Source Category: Effluent Limitations Guidelines and New Source Performance Standards, subpart C, Uranium, Radium, and Vanadium Ores Subcategory," as codified on January 1, 1983.

Criterion 8A – Daily inspections of tailings or waste retention systems must be conducted by a qualified engineer or scientist and documented. The licensee shall retain the documentation for each daily inspection as a record for three years after the documentation is made. The appropriate NRC regional office as indicated in appendix D to 10 CFR part 20 of this chapter, or the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, must be immediately notified of any failure in a tailings or waste retention system that results in a release of tailings or waste into unrestricted areas, or of any unusual conditions (conditions not contemplated in the design of the retention system) that if not corrected could indicate the potential or lead to failure of the system and result in a release of tailings or waste into unrestricted areas.

II. Financial Criteria

Criterion 9 – (a) Financial surety arrangements must be established by each mill operator before the commencement of operations to assure that sufficient

funds will be available to carry out the decontamination and decommissioning of the mill and site and for the reclamation of any tailings or waste disposal areas. . . .

. . .

IV. Long-Term Site Surveillance

Criterion 12 – The final disposition of tailings, residual radioactive material, or wastes at milling sites should be such that ongoing active maintenance is not necessary to preserve isolation. As a minimum, annual site inspections must be conducted by the government agency responsible for long-term care of the disposal site to confirm its integrity and to determine the need, if any, for maintenance and/or monitoring. Results of the inspections for all the sites under the licensee's jurisdiction will be reported to the Commission annually within 90 days of the last site inspection in that calendar year. Any site where unusual damage or disruption is discovered during the inspection, however, will require a preliminary site inspection report to be submitted within 60 days. On the basis of a site specific evaluation, the Commission may require more frequent site inspections if necessary due to the features of a particular disposal site. In this case, a preliminary inspection report is required to be submitted within 60 days following each inspection.

. . .

Va. Code § 45.1-161.292:30

License required for operation of mineral mines; term

A. No person shall engage in the operation of any mineral mine within this Commonwealth without first obtaining a license from the Department. A license shall be required prior to commencement of the operation of a mine.

. . .

Va. Code § 45.1-181

Permit required; fee; renewal fee; application; furnishing copy of map, etc., to landowner; approval by Department

It is unlawful for any operator to engage in any mining operation in Virginia, without having first obtained from the Department a permit to engage in such operation and paying a fee therefor of $31 per acre for every acre of land to be affected by the total operation for which plans have been submitted, which shall be deposited in the state treasury in a special fund to be used by the Director for the administration of this chapter. A permit shall be obtained prior to the start of any mining operation. . . . .

Va. Code § 45.1-283

Uranium mining permit applications; when accepted; uranium mining deemed to have significant effect on surface

Notwithstanding any other provision of law, permit applications for uranium mining shall not be accepted by any agency of the Commonwealth prior to July 1, 1984, and until a program for permitting uranium mining is established by statute. . . .

Act of Feb. 20, 1981, H.J. Res. 324, 1981 Va. Acts 1404

WHEREAS, it is estimated that more than fifty thousand acres of land in the Commonwealth have been leased for uranium exploration, mining and milling; and

WHEREAS, the exploration for, and the mining and milling of, uranium in other states has created the need for environmental controls and has raised substantial questions concerning the health, safety, and welfare of persons living in the vicinity of mining and milling activities; and

WHEREAS, the areas in the Commonwealth where land has been leased for uranium exploration, mining or milling are generally more densely populated than are similar areas in states where uranium exploration, mining and milling have previously occurred; and

WHEREAS, a study of the environmental effects and the possible hazards to the health, safety, and welfare of citizens living in proximity to uranium operations is appropriate; now, therefore, be it

RESOLVED by the House of Delegates, the Senate concurring, That the Virginia Coal and Energy Commission is requested to evaluate the environmental effects of uranium exploration, mining and milling which may be expected to occur in the Commonwealth and any possible detriments to the health, safety, and welfare of Virginia citizens which may result from uranium exploration, mining or milling. The Commission is to make such recommendations as it deems appropriate and necessary prior to December 31, 1981.

Act of Apr. 7, 1982, ch. 269, 1982 Va. Acts 426

Be it enacted by the General Assembly of Virginia:

1. That the Code of Virginia is amended by adding in Title 45.1 a chapter numbered 21, consisting of sections numbered 45.1-272 through 45.1-285, as follows:

CHAPTER 21.

EXPLORATION FOR URANIUM ORE

§ 45.1-272. Legislative findings; declaration of policy. – The mining of uranium within the Commonwealth has the potential to provide Its citizens with employment opportunities and other economic benefits.

It also offers the Commonwealth and the nation the possibility of developing valuable resources that can be used to produce energy in a clean, efficient manner and lessen this country's dependence on foreign energy supplies.

At the same time, the General Assembly finds that the improper and unregulated exploration for uranium can adversely affect the health, safety, and general welfare of the citizens of this Commonwealth.

The General Assembly also finds that the adoption of additional statutes during the 1983 Session of the General Assembly may be necessary in order to assure that any uranium mining and milling which may occur in the Commonwealth will not adversely affect the environment or the public health and safety.

The purposes of this chapter are to encourage and promote the safe and efficient exploration for uranium resources within the Commonwealth, and to assure, pursuant to § 45.1-284 of this Code, that uranium mining and milling will be subject to statutes and regulations which protect the environment and the health and safety of the public.

§ 45.1-273. Definitions. – The following words shall have the meanings respectively ascribed thereto:

"Chief" means the Chief of the Division of Mines of the Department of Labor and Industry or such other public officer, employee, board, commission or other authority that in emergencies may be acting in the stead, or by law be assigned the duties and authority, of the

Chief of the Division of Mines of the Department of Labor and Industry.

"Exploration Activity" means and shall be limited to the drilling of test holes or stratigraphic or core holes of a depth in excess of fifty feet for the purpose of determining the location, quantity, or quality of uranium ore.

"Person" shall mean any individual, firm, corporation, partnership, association or other legal entity.

§ 45.1-274. Permit for exploration activity required; fee. – A. It shall be unlawful for any person to commence any exploration activity as defined herein without first obtaining a permit to do so from the Chief. The application for the permit shall be in such form as the Chief may prescribe and shall be accompanied by a fee of $250 and such other information as may be required by this chapter.

B. The application for a permit to carry out any exploration activity shall be accompanied by a bond, payable to the Commonwealth, with surety acceptable to the Chief. The bond shall ensure compliance with the provisions of this chapter and any regulations promulgated hereunder relating to the drilling, redrilling, plugging and abandoning of any exploration activity. The bond shall be set by the Chief in such amount as may be deemed reasonable and necessary.

C. An initial permit shall be valid for a period of one year, and may be renewed for a like period of time.

§ 45.1-275. Maps or plats of proposed exploration activity area. – Before undertaking any exploration activity on any tract of land, the person proposing the exploration activity shall prepare or have prepared and file with the Chief, together with the application required by § 45.1-274 of this Code, an accurate map, on a scale to be stated thereon, showing the location of the proposed exploration activity; the courses and distances of such activity from two permanent points or landmarks on the tract; the approximate location areas in which test holes or core or stratigraphic holes may be drilled; the name of the owner; and boundaries and acreage of the tract on which the exploration activity is to take place.

§ 45.1-276. Abandoning exploration hole; affidavits required. – Within forty-five days after the abandonment of any exploration hole, the permittee shall notify the Chief that such exploration hole has been plugged and abandoned, giving the location of such hole. The permittee shall submit an affidavit, in triplicate, which shall set forth the time and manner in which the hole was plugged and filled. One copy of this affidavit shall be retained by the permittee, one sent to the State Geologist, and the third shall be mailed to the Chief.

§ 45.1-277. Plugging. – The plugging of exploration holes shall be as follows:

1. All exploration holes shall be adequately plugged with cement from the bottom of the hole

upward to a point three feet below plow depth. The remainder of the hole between the top of the plug and the surface shall be filled with cuttings or nontoxic material.

2. If multiple aquifers alternating usable quality water arid salt water zones, or other conditions determined by the Chief to be potentially deleterious to surface or ground water are encountered, the conditions must be isolated immediately by cement plugs. "Usable quality water" is defined as ground water that is used or can be used for a beneficial purpose, including, but not limited to, domestic, livestock, or irrigation uses. Each hole shall be plugged with cement to prevent water from flowing into or out of the hole or mixing within the hole. The length of the plug shall be determined by the Chief based on available data on the specific site.

3. Each exploration hole shall be plugged as soon as reasonably practical after drilling, unless multiple aquifers are encountered.

4. Alternative plugging procedures and materials may be utilized when the applicant has demonstrated to the Chief's satisfaction that the alternatives will protect ground waters and comply with the provisions of this chapter. In the event that a hole is more suitably plugged with a nonporous material other than cement, the material shall have characteristics at least equal to cement.

5. In the event that an exploration hole is to remain unplugged pursuant to the provisions of § 45.1-278 of this Code, the procedure contained in paragraph

2, if applicable, shall be applied and the exploration hole shall be plugged to the extent required by that paragraph.

§ 45.1-278. Developing exploration hole as water well. – If any exploration hole drilled for the purpose of determining the location, quantity or quality of uranium ore indicates a stratum or source of potable fresh water which could be developed pursuant to established EPA safe drinking water standards for a community water system, upon the request of the owner of the property on which the exploration hole is located and on application to and approval by the Chief, who shall secure concurrence from the Department of Health, the well, in lieu of being plugged and abandoned, may be developed and completed as a water well. The development and completion of an exploration hole as a water well shall be performed in accordance with applicable state water control law and regulation.

§ 45.1-279. Rules and regulations. – The Chief shall promulgate such rules and regulations as may be necessary and proper to carry out the provisions of this chapter.

§ 45.1-280. Right of inspection by Chief. – For the purposes of carrying out the provisions of this chapter, the Chief is hereby vested with authority to inspect at reasonable times and in a reasonable manner any area or areas for which he has received an application for a permit, or granted a permit, for exploration activity.

§ 45.1-281. Administrative Process Act applicable. – The provisions of the Administrative Process Act

(§ 96.12:1 et seq. of this Code) shall be applicable to the provisions of this chapter.

§ 45.1-282. Penalties. – A. Any person who violates any provision of this chapter, or who fails, neglects or refuses to comply with any rule or regulation issued by the Chief, or final order of a court lawfully issued, shall be subject to a civil penalty, not to exceed $10,000, for each violation. Each day of violation shall constitute a separate offense.

B. The Chief shall have the authority to restrain violations of this chapter in accordance with the provisions of § 45.1-141 of this Code.

§ 45.1-283. Uranium Mining Permit Applications. – Notwithstanding any other provision of law, permit applications for uranium mining shall not be accepted by any agency of the Commonwealth prior to July l, 1983. For the purpose of construing § 45.1-180(a) of this Code, uranium mining shall be deemed to have a significant effect on the surface.

§ 45.1-284. State and local authority. – Nothing contained in this chapter shall be construed to alter the authority of any state or local governing body, including the authorities conferred under Chapter 11 of Title 15.1 of this Code, relative to matters which are the subject of this chapter.

§ 45.1-285. Confidentiality of logs, surveys and reports. – The Chief shall hold confidential all logs, surveys, plats and reports filed under this chapter by those engaged in the exploration for uranium for a period of

two years after the completion of the exploratory activities. Further, upon written request by any person engaged in the exploration for uranium, the Chief shall hold confidential all logs, surveys, plats and reports filed under this chapter for all additional two-year periods. Such request shall be granted by the Chief if the requesting party certifies that he considers all such information to be of a proprietary nature relating to his competitive rights. Nothing in this section shall be construed to deny to the State Geologist the access to all logs, surveys, plats and reports filed under this chapter. The State Geologist, however, shall be bound to hold this information confidential to the same extent as the Chief is bound.

2. That an emergency exists and this act is in force from its passage.

Act of Feb. 24, 1983, ch. 3, 1983 Va. Acts 3

Be it enacted by the General Assembly of Virginia:

1. That § 45.1-283 of the Code of Virginia is amended and reenacted and that the Code of Virginia is amended by adding In Chapter 21 of Title 45.1, an article numbered 2, consisting of sections numbered 45.1-285.l through 45.1-285.10 as follows:

§ 45.1-283. Uranium mining permit applications. – Notwithstanding any other provision of law, permit applications for uranium mining shall not be accepted by any agency of the Commonwealth prior to July 1,

~~1983~~ *1984 and until a program for permitting uranium mining is established by statute.* For the purpose of construing § 45.1-180(a) of this Code, uranium mining shall be deemed to have a significant effect on the surface.

Article 2.

Uranium Administrative Group; Functions.

§ 45.1-285.1. Findings; declaration of policy. – The General Assembly finds: (i) that while uranium mining and milling activity can generate substantial benefits, it also raises a wide range of environmental and other local concerns; and (ii) that a preliminary study, identifying many potential environmental and other effects of uranium development and describing procedures and responsibilities that the Commonwealth and a proponent would be obligated to accept if development were to proceed, has not identified any environmental or public health concern that could preclude uranium development in Virginia.

The General Assembly further finds, however, that a possibility exists that certain impacts of uranium development activity may reduce or potentially limit certain uses of Virginia environment and resources, and that therefore additional evaluation of the costs and benefits of such activity is necessary before a final decision can be made regarding its acceptability in the Commonwealth. The General Assembly encourages private industry to participate in further studies and analyses of the costs and benefits of uranium mining and

milling activity in the Commonwealth. Evaluation of these costs and benefits will be enhanced by further studies pertaining to Pittsylvania County where preliminary study has focused and where uranium development activity is currently contemplated by proponents.

The General Assembly emphasizes that uranium mining and milling activity presents issues of great concern to the public. It therefore encourages public participation in the deliberations concerning these issues.

§ 45.1-285.2. Definitions. – The following words shall have the meanings respectively ascribed thereto:

"Commission" shall mean the Virginia Coal and Energy Commission.

"Decommissioning" shall mean the process by which mining, milling and tailings management operations are terminated and the associated facilities removed or rendered inactive.

"Group" shall mean the Uranium Administrative Group established in § 45.1-285.3 of this Code.

"Milling" shall mean the operation by which uranium ore is processed or treated to extract uranium.

"Mining" shall mean any activity meeting the definition of mining in § 45.1-180(a) of Chapter 16 of this title. For the purpose of construing § 45.1-180(a) of Chapter 16 of this title, uranium mining shall be construed to have a significant effect on the surface.

"Person" shall mean any individual, firm, corporation, partnership, association or other legal entity.

"Reclamation" shall mean any activity meeting the definition of reclamation in § 45.1-180(k) of Chapter 16 of this title.

"Tailings" shall mean the residue remaining after extraction of uranium from uranium ore whether or not the residue is left in piles, but shall not include ore bodies or ore stock piles. "Tailings management" means the methods by which tailings are handled, stored or disposed of.

§ 45.1-285.3. Uranium Administrative Group. – In order to effectuate the provisions of this Chapter, there is created a Uranium Administrative Group which shall be composed of the following: the Chairman of the Commission or his designee who shall also serve as Chairman of the Group; the Administrator of the Council on the Environment or her designee; the Executive Director of the State Water Control Board; the Executive Director of the State Air Pollution Control Board; the Commissioner of the State Board of Health; the Director of the Department of Conservation and Economic Development; the Commissioner of the Department of Agriculture and Consumer Services; the Director of the Division of Industrial Development; one member to be designated by the local governing body of Pittsylvania County; one member to be designated by the local governing body of Halifax County; two members to be designated by the Chairman of the Commission from the

State at large and two members to be designated by the Governor from the State at large.

§ 45.1-285.4. Employment of consultants; other support. – In performing the duties established in this article, the Group shall have the authority to employ consultants and each state agency representative shall designate one or more individuals from the respective agencies to assist in the administrative functions necessitated by the duties established in this chapter. For purposes of the performance of these duties, the individuals shall be directly responsible to the Chairman of the Group.

§ 45.1-285.5. Duties of the Group. – The Group shall perform the following duties:

A. Review, comment on and approve any proposals submitted by persons for studying the effects of uranium development activity at specific sites in Pittsylvania County to determine whether such study proposals address each of the statutory criteria established by§ 45.1-285.6 of this article.

B. Evaluate, in light of the statutory criteria established by § 45.1-285.6 of this Code and with the aid of independent consultants, and participation by the public, if appropriate, any study submitted by private parties which analyzes the effects of uranium development activity at specific sites in Pittsylvania County.

C. Based on studies that analyze each of the statutory criteria established by § 45.1-285.6 of this Code submitted pursuant to a study plan filed in accordance

with § 45.1-285.9, present a report to the Commission by December l, 1983. The report shall:

1. Explain with respect to each specific site in Pittsylvania County that has been subject to a study meeting the criteria of this chapter: the costs and benefits of permitting uranium development at the specific site, including any beneficial or adverse effects that cannot be quantified and a description of the persons or classes of persons likely to receive the benefits or bear the costs; the reasonable alternatives for achieving the identified benefits of the uranium development activity, including an alternative siting analysis; and

2. In light of the results of site-specific studies under this chapter, discuss the advantages and disadvantages of enacting legislation under which permits could be issued for uranium mining and milling in Pittsylvania County or at specified locations therein; and

3. Include draft legislation for consideration of the Commission, if appropriate, regulating the mining and milling of uranium in Pittsylvania County and reasonably assuring that appropriate planning, design, operating, decommissioning and post-closure procedures are followed to minimize adequately any adverse environmental or human health consequences; and

4. Discuss the advantages and disadvantages of seeking agreement with the federal government providing for discontinuance of the federal government's responsibility for regulating uranium milling and tailings management. In making this recommendation

the Group shall assess the adequacy of existing federal and state health, safety and environmental standards pertaining to uranium development activity; and

5. Discuss the Group's consultation with federal and state agencies, including the United States Nuclear Regulatory Commission, having expertise relevant to regulating uranium development activity; and

6. The report of the Group to the Commission may include specific recommendations if they are deemed appropriate, or

7. Advise the Commission that additional studies or a continuation of existing studies are necessary in order to adequately report under paragraphs 1-6 of this section.

§ 45.1-285.6. Study criteria. – The Group shall base its analysis of the costs and benefits of permitting uranium development at specific sites in Pittsylvania County on the criteria set out in this section. Any study submitted to the Group pursuant to this chapter shall address each of these criteria. The Group shall ensure that it shall receive information, from whatever sources, adequate to analyze each of the criteria:

A. Site suitability including geological, hydrological, hydrogeological, seismological, biological and meteorological characteristics, demography, and current uses of the land in the vicinity of the site.

B. Analysis of all pathways by which radionuclides and other contaminants may enter or affect ground waters, receiving surface waters, and the air

and the biota and be transmitted to critical receptors as a result of mining, milling and tailings management at the specific site; the estimated cumulative dose to such critical receptors; and available data on the baseline radioactive, chemical and physical characteristics of the ground waters, receiving surface waters, air and the biota identified in the pathway analysis as potentially subject to increased levels of contamination.

C. Plans for monitoring changes from the baseline radioactive and chemical characteristics of the ground water, receiving surface waters, air and the biota identified in the pathway analysis as potentially subject to increased levels of contamination.

D. The qualifications of the potential applicant or applicants to conduct uranium development activity at the specific site, including technical and financial qualifications and past operating experience and practices.

E. The specific nature of the proposed mining, milling and tailings management activity, including:

1. With respect to mining activity, the type of mining operation and the equipment to be used; the anticipated duration of the mining operation and the number of acres to be affected; a detailed map of the site; the result of test borings or core samplings from the site; the amount of soil and waste rock to be stockpiled; plans for surface water and ground water drainage and diversion facilities; plans for domestic and mine water and waste handling systems; the quantity and quality of atmospheric releases and the methods for controlling

such releases; and plans for protecting the occupational health and safety of employees working in the mines.

2. With respect to milling activity, the capacity of the mill; the processes to be used in milling and ore extraction; the reagents and processing materials to be used; flow diagrams and materials balance for raw materials, reagents, processing materials, finished products and by-products for the various process units; the quantity of water to be used and the water balance In the plant; the quantity and quality of liquid and solid wastes to be produced; the quantity and quality of atmospheric releases and the methods for controlling such releases; the methods for monitoring emissions from the processing facilities; the method for conveying tailings and wastewater from the mill; and plans for protecting the occupational health and safety of employees working in the mill.

3. With respect to tailings management, the quantity and characteristics of the tailings; the method of disposal; the size of the tailings disposal area; the method of liquid effluent treatment; the hydrology, hydrogeology, and surficial and bedrock geology of the disposal area; stability analysis for all embankments; seepage management techniques; seepage and ground water monitoring facilities; treatment systems for the removal of solids, radionuclides, heavy metals and other substances from wastewaters; systems for diversion of fresh water away from the tailings management area; and the quantity and quality of atmospheric releases and the methods for controlling such releases.

and the biota and be transmitted to critical receptors as a result of mining, milling and tailings management at the specific site; the estimated cumulative dose to such critical receptors; and available data on the baseline radioactive, chemical and physical characteristics of the ground waters, receiving surface waters, air and the biota identified in the pathway analysis as potentially subject to increased levels of contamination.

C. Plans for monitoring changes from the baseline radioactive and chemical characteristics of the ground water, receiving surface waters, air and the biota identified in the pathway analysis as potentially subject to increased levels of contamination.

D. The qualifications of the potential applicant or applicants to conduct uranium development activity at the specific site, including technical and financial qualifications and past operating experience and practices.

E. The specific nature of the proposed mining, milling and tailings management activity, including:

1. With respect to mining activity, the type of mining operation and the equipment to be used; the anticipated duration of the mining operation and the number of acres to be affected; a detailed map of the site; the result of test borings or core samplings from the site; the amount of soil and waste rock to be stockpiled; plans for surface water and ground water drainage and diversion facilities; plans for domestic and mine water and waste handling systems; the quantity and quality of atmospheric releases and the methods for controlling

such releases; and plans for protecting the occupational health and safety of employees working in the mines.

2. With respect to milling activity, the capacity of the mill; the processes to be used in milling and ore extraction; the reagents and processing materials to be used; flow diagrams and materials balance for raw materials, reagents, processing materials, finished products and by-products for the various process units; the quantity of water to be used and the water balance In the plant; the quantity and quality of liquid and solid wastes to be produced; the quantity and quality of atmospheric releases and the methods for controlling such releases; the methods for monitoring emissions from the processing facilities; the method for conveying tailings and wastewater from the mill; and plans for protecting the occupational health and safety of employees working in the mill.

3. With respect to tailings management, the quantity and characteristics of the tailings; the method of disposal; the size of the tailings disposal area; the method of liquid effluent treatment; the hydrology, hydrogeology, and surficial and bedrock geology of the disposal area; stability analysis for all embankments; seepage management techniques; seepage and ground water monitoring facilities; treatment systems for the removal of solids, radionuclides, heavy metals and other substances from wastewaters; systems for diversion of fresh water away from the tailings management area; and the quantity and quality of atmospheric releases and the methods for controlling such releases.

F. Plans, during active operations, transition and post-closure phases, for decommissioning, reclamation and securing of the mining, milling and tailings management facilities, including any research required to demonstrate the effectiveness of such plans.

G. Analysis of potential accidents in connection with the proposed mining, milling, tailings management, decommissioning and post-closure activity and contingency plans for responding to such accidents.

H. The extent of radiological, or nonradiological impacts resulting from mining, milling, tailings management, decommissioning and post-closure activities with particular attention to the following possible effects:

1. The contamination of local ground water and surface water by discharges from mining, milling and tailings management, and the loss of such waters as suitable water supply sources, including the extent to which applicable regulatory standards may be exceeded.

2. The reduction or loss of yields from wells due to mine dewatering, or other mining, milling or tailings management activities, and the subsequent drawdown of the surrounding water table.

3. The loss of use of local ground water and surface water sources resulting from the migration of radionuclides and other contaminants from the former

mining or tailings area after decommissioning, including the extent to which applicable regulatory standards may be exceeded.

4. The need to avoid full-time human residency within a certain radius of the property during operations due to emission of radon, other radionuclides, or dust from mining, milling and tailings management.

5. The permanent preclusion of the tailings management area after decommissioning from certain land use activities.

6. Any other effects that would impair use of the local environment during operations or after decommissioning.

I. The socioeconomic effects of the uranium development activity at the specific site and its associated regulation on the local community and the Commonwealth.

J. A description of the costs and benefits of allowing the proposed uranium development activity to proceed at the specific site, including any beneficial or adverse effects that cannot be quantified and a description of the persons or groups of persons likely to receive the benefits or bear the costs; a description of reasonable alternatives for achieving the identified benefits of the uranium development activity, including an alternative siting analysis; and an explanation of how, if at all, the benefits of uranium development activity at the specific site are likely to justify the costs and adverse effects and an explanation of why conducting uranium

F. Plans, during active operations, transition and post-closure phases, for decommissioning, reclamation and securing of the mining, milling and tailings management facilities, including any research required to demonstrate the effectiveness of such plans.

G. Analysis of potential accidents in connection with the proposed mining, milling, tailings management, decommissioning and post-closure activity and contingency plans for responding to such accidents.

H. The extent of radiological, or nonradiological impacts resulting from mining, milling, tailings management, decommissioning and post-closure activities with particular attention to the following possible effects:

1. The contamination of local ground water and surface water by discharges from mining, milling and tailings management, and the loss of such waters as suitable water supply sources, including the extent to which applicable regulatory standards may be exceeded.

2. The reduction or loss of yields from wells due to mine dewatering, or other mining, milling or tailings management activities, and the subsequent drawdown of the surrounding water table.

3. The loss of use of local ground water and surface water sources resulting from the migration of radionuclides and other contaminants from the former

mining or tailings area after decommissioning, including the extent to which applicable regulatory standards may be exceeded.

4. The need to avoid full-time human residency within a certain radius of the property during operations due to emission of radon, other radionuclides, or dust from mining, milling and tailings management.

5. The permanent preclusion of the tailings management area after decommissioning from certain land use activities.

6. Any other effects that would impair use of the local environment during operations or after decommissioning.

I. The socioeconomic effects of the uranium development activity at the specific site and its associated regulation on the local community and the Commonwealth.

J. A description of the costs and benefits of allowing the proposed uranium development activity to proceed at the specific site, including any beneficial or adverse effects that cannot be quantified and a description of the persons or groups of persons likely to receive the benefits or bear the costs; a description of reasonable alternatives for achieving the identified benefits of the uranium development activity, including an alternative siting analysis; and an explanation of how, if at all, the benefits of uranium development activity at the specific site are likely to justify the costs and adverse effects and an explanation of why conducting uranium

development activity at that site is preferable to conducting it at alternative sites.

§ 45.1-285.7. Additional factors. – The Group is authorized to specify criteria in addition to those enumerated in paragraphs A through J of § 45.1-285.6 of this Code as it deems necessary to formulate its report to the Commission.

§ 45.1-285.8. Recommendations to the General Assembly. – Upon the receipt of the report of the Group, the Commission shall hold one or more public hearings in Pittsylvania County, Halifax County and the City of Richmond and shall thereafter report to the General Assembly with specific recommendations concerning the subject matter of the report, together with specific draft legislation implementing those recommendations, if appropriate.

§ 45.1-285.9. Study filing procedure. – Any person who intends to file a study plan with the Group pursuant to this chapter must submit, as a condition of filing such a study, the following items to the Group within thirty days of the enactment of this act or at such later time: (i) notice of intent to file a study and (ii) a schedule for completing and filing the study.

§ 45.1-285.10. Applicability of studies under this chapter to any future licensing proceedings. – In the event that a procedure for licensing uranium development activity in Pittsylvania County is established by statute or regulation, the information in any study submitted to the Group pursuant to this chapter may be used in part or in full to meet any requirement of the

licensing procedure which such information, in the judgment of any agency responsible for interpreting such requirement, is sufficient to fulfill. However, no finding or conclusion of any such study shall be binding on any agency with respect to any issue in any future licensing proceeding.

2. That an emergency exists and this act is in force from its passage.

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF VIRGINIA
DANVILLE DIVISION

VIRGINIA URANIUM, INC.,
6 North Main Street
Chatham, VA 24531,

COLES HILL, LLC,
1040 Coles Road
Chatham, VA 24531,

BOWEN MINERALS, LLC
253 Sheva Road
Chatham, VA 24531,

VIRGINIA ENERGY
RESOURCES, INC.
675 W. Hastings Street, Suite 611
Vancouver, British Columbia
Canada V6B 1N2,

Plaintiffs,

v.

TERRY MCAULIFFE, in his official capacity as Governor of Virginia,
Patrick Henry Building
1111 East Broad Street
Richmond, VA 23219,

MAURICE JONES, in his official capacity as Virginia Secretary of Commerce and Trade,
Patrick Henry Building
1111 East Broad Street
Richmond, VA 23219,

Civil Action No.
4:15CV00031

CONRAD SPANGLER, in his official capacity as Director of the Virginia Department of Mines, Minerals and Energy, Washington Building, 8th Floor 1100 Bank Street Richmond, VA 23219,

BRADLEY C. LAMBERT, in his official capacity as Deputy Director of the Virginia Department of Mines, Minerals and Energy, 3405 Mountain Empire Road Big Stone Gap, VA 24219,

JAMES P. SKORUPA, in his official capacity as Director of the Virginia Department of Mines, Minerals and Energy's Division of Mineral Mining, 900 Natural Resources Drive, Suite 400 Charlottesville, VA 22903,

MOLLY J. WARD, in her official capacity as Virginia Secretary of Natural Resources, Patrick Henry Building 1111 East Broad Street Richmond, VA 23219,

DAVID K. PAYLOR, in his official capacity as Director of the Virginia Department of Environmental Quality, 629 East Main Street Richmond, VA 23219,

ROBERT J. WELD, in his official capacity as Regional Director of the Department of Environmental Quality's Blue Ridge Regional Office, 3019 Peters Creek Road Roanoke, VA 24019,

MICHAEL DOWD, in his official capacity as Director of the Virginia Department of Environmental Quality's Air Division, 629 East Main Street Richmond, VA 23219,

MELANIE D. DAVENPORT, in her official capacity as Director of the Virginia Department of Environmental Quality's Water Permitting Division, 629 East Main Street Richmond, VA 23219,

JUSTIN WILLIAMS, in his official capacity as Director of the Virginia Department of Environmental Quality's Division of Land Protection and Revitalization, 629 East Main Street Richmond, VA 23219,

Defendants.

COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF

Plaintiffs Virginia Uranium, Inc., Coles Hill, LLC, Bowen Minerals, LLC, and Virginia Energy Resources,

Inc. (collectively "Plaintiffs" or "Virginia Uranium"), by and through the undersigned attorneys, file this Complaint against the above-captioned Defendants, in their official capacities as the Governor and officers of Virginia agencies responsible for the regulation of mining activities in the Commonwealth (collectively "Defendants"). Plaintiffs seek both declaratory and injunctive relief: a declaration that the moratorium on uranium mining enacted by the Commonwealth in 1982 and enforced ever since is preempted by supreme federal law, and an injunction compelling Defendants to ignore that invalid state statute and accept and process Virginia Uranium's permit and license applications in the same manner they would an application relating to any other natural mineral resource. Plaintiffs hereby allege as follows:

INTRODUCTION

1. The United States Constitution makes federal law "the supreme Law of the Land," and anything in the "Laws of any State" that either conflicts with federal law or invades a field of plenary federal concern is preempted and denied legal force and effect. Early on in the nuclear age, Congress recognized that the acquisition, storage, and use of radioactive materials like uranium within the United States raise vital issues of national security, commerce, and welfare and thus are matters of overriding federal concern. It further recognized that the proper handling of radioactive materials raises important safety concerns that are most effectively managed on the federal level. Accordingly, it

enacted the Atomic Energy Act of 1954, which, as the Supreme Court recognized over a quarter-century ago, preempts the entire field of radiological safety concerns, except in those narrow enclaves of State authority that Congress has specifically reserved.

2. In defiance of this unequivocal exercise of supreme federal power, in 1982 Virginia enacted a "moratorium" that bans the mining of uranium in the Commonwealth. Section 45.1-283 of the Virginia Code provides:

> Notwithstanding any other provision of law, permit applications for uranium mining shall not be accepted by any agency of the Commonwealth prior to July 1, 1984, and until a program for permitting uranium mining is established by statute.

3. Virginia's ban on uranium mining was from the outset grounded in the very radiological safety concerns that Congress placed outside of the regulatory authority of the States. And in the decades since, Virginia has extended and then repeatedly refused to lift its ban, actions that were motivated by those same – preempted – radiological safety concerns.

4. Virginia's ban on uranium mining has had a devastating effect on Plaintiffs' property rights. Virginia Uranium controls 3,500 acres of property, more or less, in rural Pittsylvania County that sit atop a deposit of an estimated 119 million pounds of uranium ore. This deposit – the largest known deposit of uranium in the United States and one of the largest in the

world – would have a market value of approximate $6 billion if it could be mined and sold to America's nuclear power plants. But it is worth nothing so long as Virginia requires it to remain in the ground. And according to multiple studies, its excavation would bring unprecedented economic prosperity to the region. What is more, because nearly 90%of the uranium used in America's nuclear power plants is imported – roughly one-fifth of it from Russia – extracting the uranium in Pittsylvania County would significantly contribute to the Nation's energy independence from its hostile geopolitical rivals.

5. Virginia's ban on uranium mining is grounded on the concern that the radioactive byproduct, called "tailings," created in the process of extracting and processing uranium ore might contaminate water supplies. As numerous studies indicate, however, if processed and stored with the use of modern, reliable mining technology and in compliance with stringent federal regulations promulgated by the Nuclear Regulatory Commission ("NRC"), uranium tailings can be safely stored without significant risk to the health and safety of those who live in the area. In other words, when Virginia asked the question whether the development of the Commonwealth's uranium resources posed an unacceptable risk to health and safety, it got the answer wrong. But more importantly, it had no business asking that question to begin with. For the radiological safety concerns that are at the heart of Virginia's ban are squarely within the field of exclusive federal regulatory concern.

6. Because Virginia's ban on uranium mining is grounded squarely in the field of radiological safety concerns that Congress has deliberately withdrawn from Virginia's regulatory jurisdiction, it is in direct, irreconcilable conflict with federal law. The ban is therefore invalid under the Supremacy Clause. *Pacific Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190 (1983); *Entergy Nuclear Vermont Yankee, LLC v. Shumlin*, 733 F.3d 393 (2d Cir. 2013). And because this is so, Plaintiffs are entitled to a judgment declaring that ban a legal nullity and enjoining Defendants from giving it any force or effect.

JURISDICTION AND VENUE

7. This Court has subject-matter jurisdiction over Plaintiffs' preemption claim under 28 U.S.C. § 1331. Plaintiffs seek remedies under 28 U.S.C. §§ 1651, 2201, and 2202.

8. Venue is proper in this Court under 28 U.S.C. § 1391(b)(2) and W.D. VA. GEN. R. 2(a)-(b), because the Coles Hill and Bowen Minerals properties, which contain the uranium deposit that is the subject of this action, are wholly situated in Pittsylvania County, within this Division.

PARTIES

9. Plaintiff Virginia Uranium, Inc. is a Virginia corporation formed in 2007 by Walter Coles, Sr., and his neighbor Henry Bowen to develop the large uranium

deposit that lies beneath their adjoining farms. Virginia Uranium, Inc. has an exclusive right to the mineral estate in the uranium beneath the Coles Hill and Bowen family farms until 2045, pursuant to a long-term lease. Virginia Uranium, Inc. is chartered and headquartered in Virginia. Its principal place of business is 6 North Main Street, Chatham, VA 24531.

10. Plaintiff Coles Hill, LLC is a Virginia limited liability company that owns the land containing the bulk of the Coles Hill uranium deposit. Coles Hill, LLC leases the mineral estate in that part of the deposit to Plaintiff Virginia Uranium, Inc., retaining a royalty interest in the mineral estate. Coles Hill, LLC is registered and headquartered in Virginia. Its principal place of business is 1040 Coles Road, Chatham, VA 24531.

11. Plaintiff Bowen Minerals, LLC is a Virginia limited liability company which owns the land containing a portion of the Coles Hill uranium deposit. Bowen Minerals, LLC leases the mineral estate in that part of the deposit to Plaintiff Virginia Uranium, Inc., retaining a royalty interest in the mineral estate. Bowen Minerals, LLC is registered and headquartered in Virginia. Its principal place of business is 253 Sheva Road, Chatham, VA 24531.

12. Plaintiff Virginia Energy Resources, Inc., is the corporate parent and sole owner of Plaintiff Virginia Uranium, Inc. Virginia Energy Resources, Inc., is a publicly traded corporation chartered and headquartered in British Columbia, Canada. Its principal place

of business is 675 West Hastings Street, Suite 611, Vancouver, BC, Canada V6B 1N2.

13. Defendant Terry McAuliffe is the Governor of Virginia. As head of the Commonwealth's executive branch, he supervises the Secretary of Commerce and Trade and the Secretary of Natural Resources, and, through them, the Department of Mines, Minerals and Energy ("DMME") and the Department of Environmental Quality ("DEQ"). His official address is Patrick Henry Building, 1111 East Broad Street, Richmond, VA 23219. He is being sued in his official capacity.

14. Defendant Maurice Jones is Virginia's Secretary of Commerce and Trade. Subject to the direction and supervision of the Governor, he is responsible for setting the policy of the Virginia Department of Mines, Minerals, and Energy and holding its officers accountable in the conduct of their powers and duties. His official address is Patrick Henry Building, 1111 East Broad Street, Richmond, VA 23219. He is being sued in his official capacity.

15. Defendant Conrad Spangler is the Director of the Virginia Department of Mines, Minerals and Energy. As chief officer of the DMME, he exercises, delegates, or supervises all the powers of the DMME, subject to oversight by the Secretary of Commerce and Trade. His official address is Washington Building, 8th Floor, 1100 Bank Street, Richmond, VA 23219. He is being sued in his official capacity.

16. Defendant Bradley C. Lambert is a Deputy Director of the Virginia Department of Mines, Minerals and Energy. As Deputy Director, he oversees – subject to the supervision of the Director – the DMME's regulatory Divisions, including the Division of Mineral Mining, which operates the DMME's permitting process. His official address is 3405 Mountain Empire Road, Big Stone Gap, VA 24219. He is being sued in his official capacity.

17. Defendant James P. Skorupa is the Director of the DMME's Division of Mineral Mining. As Director, he exercises, delegates, or supervises the permitting and licensing power of the Division, subject to the oversight of the Director and Deputy Director. His official address is 900 Natural Resources Drive, Suite 400, Charlottesville, VA 22903. He is being sued in his official capacity.

18. Defendant Molly J. Ward is Virginia's Secretary of Natural Resources. Subject to the direction and supervision of the Governor, she is responsible for setting the policy of the Virginia Department of Environmental Quality and holding its officers accountable in the conduct of their powers and duties. Her official address is Patrick Henry Building, 1111 East Broad Street, Richmond, VA 23219. She is being sued in her official capacity.

19. Defendant David K. Paylor is the Director of the Virginia Department of Environmental Quality. As chief officer of the DEQ, he exercises, delegates, or supervises all the powers of the DEQ, subject to oversight

by the Secretary of Natural Resources. His official address is 629 East Main Street, Richmond, VA 23219. He is being sued in his official capacity.

20. Defendant Robert J. Weld is the Regional Director of the DEQ's Blue Ridge Regional Office. As Regional Director, he exercises, delegates, or supervises – subject to oversight by the DEQ's Director – the permitting and licensing powers and duties of the Division with respect to applications from Pittsylvania County, where Plaintiffs' uranium deposit is situated. His official address is 3019 Peters Creek Road, Roanoke, VA 24019. He is being sued in his official capacity.

21. Defendant Michael Dowd is the Director of the DEQ's Air Division. As Director, he exercises, delegates, or supervises the DEQ's permitting and licensing powers and duties with respect to air pollution, subject to the oversight of the DEQ's Director. His official address is 629 East Main Street, Richmond, VA 23219. He is being sued in his official capacity.

22. Defendant Melanie D. Davenport is the Director of the DEQ's Water Permitting Division. As Director, she exercises, delegates, or supervises the DEQ's permitting and licensing powers and duties with respect to water pollution, subject to the oversight of the DEQ's Director. Her official address is 629 East Main Street, Richmond, VA 23219. She is being sued in her official capacity.

23. Defendant Justin Williams is the Director of the DEQ's Division of Land Protection and Revitalization. As Director, he exercises, delegates, or supervises

the DEQ's permitting and licensing powers and duties with respect to hazardous waste, subject to the oversight of the DEQ's Director. His official address is 629 East Main Street, Richmond, VA 23219. He is being sued in his official capacity.

FACTUAL ALLEGATIONS

The Coles Hill Uranium Deposit

24. Located just to the northeast of Chatham, Virginia, the Coles Hill estate's gently sloped fields have been farmed by the Coles family since shortly after the Revolutionary War. Beneath those fields lies a deposit of approximately 119 million pounds of uranium ore – the largest natural deposit of uranium in the United States and one of the largest in the world.

25. The bulk of the Coles Hill deposit is located on land owned by Plaintiff Coles Hill, LLC. Walter Coles, Sr., has lived on the Coles Hill family estate ever since retiring from a career in the United States Foreign Service in 2003. Mr. Coles is also the Chairman, President, and CEO of Plaintiff Virginia Uranium, Inc., which possesses a long-term leasehold interest in the mineral estate in the uranium until 2045. Virginia Uranium, Inc., also leases the mineral estate in the smaller portion of the uranium deposit that lies beneath the neighboring Bowen family farm, pursuant to a similar lease with Plaintiff Bowen Minerals, LLC.

26. The economic and energy-generating potential of the Coles Hill deposit is enormous. At uranium's

current pricing, the deposit is worth about $6 billion, if it can be extracted from the ground. Once mined and processed, the Coles Hill deposit contains enough uranium to power all of the United States' domestic nuclear reactors continuously for two years. Indeed, the uranium beneath Coles Hill could produce an amount of energy equivalent to 3.6 billion barrels of oil – and with a fraction of the greenhouse gas emissions.

27. As several studies have confirmed, the process of mining the uranium beneath Coles Hill, processing it, and shipping it off-site would create hundreds of jobs and bring unprecedented economic growth to the region. For example, in 2011, Chrnura Economics & Analytics – an independent consulting firm commissioned by the Virginia Coal and Energy Commission to study the socioeconomic impacts of uranium mining in Virginia – released a study finding that uranium mining in Coles Hills, if allowed to go forward, would create 1,052 annual jobs and would generate $4.8 billion of net revenue for Virginia businesses.

28. Allowing the uranium in the Coles Hill deposit to be mined is also in the national security interest of the United States. Nuclear power plants produce nearly 20% of the nation's electricity, but nearly 90% of the uranium used in those power plants is imported. Nineteen percent of that uranium is imported from Russia. Indeed, Russian-controlled energy companies have aggressively sought to take control of uranium-mining companies throughout the world – including,

as recently reported, the large Canadian company Uranium One. Besides Russia's own uranium reserves and the extensive stakes Russian companies own in uranium operations in Kazakhstan, the Russians have now gained control of one-fifth of the uranium production capacity in the United States.

The Process of Uranium Development

29. Developing the uranium deposit beneath Coles Hill would entail three basic processes: mining, milling, and tailings management.

30. First, the raw uranium ore must be *mined* from the ground. Because of the mineralogical properties of the Coles Hill deposit, the uranium there would likely be extracted through a conventional underground mine, much like coal, titanium, and numerous other minerals, many of which are currently being mined in Virginia. Virginia has no similar ban on mining any mineral other than uranium.

31. Once the uranium ore is extracted from the ground, it needs to be *milled* or processed into useable form. Typically, an on-site uranium mill grinds the uranium ore into a sand, which is then run through either an acidic or alkaline solution to separate the pure uranium from the waste or "tailings." The uranium is then concentrated and dried into "yellowcake," which is the final product that is commercially sold and shipped offsite for enrichment.

32. Finally, the "tailings," or the rock left behind when the uranium is removed from the raw ore, must be secured in a *tailings management* facility. Though the pure uranium is separated from the tailings in the milling process, the tailings continue to have roughly 85% of their naturally occurring radioactivity. Accordingly, well-known and thoroughly tested best practices – incorporated in the federal regulations discussed below – require that the tailings be stored securely, in a way that is designed to keep them from contaminating the surrounding air, groundwater, and surface water. For example, if uranium development is allowed to go forward at Coles Hill, Virginia Uranium plans to secure the resulting tailings in safe and reliable below-grade cells, which are capped on top with synthetic and earthen materials to prevent the release of radioactive materials into the air, and lined on the bottom with multiple layers of heavy-duty materials to prevent any release into the surrounding soil or groundwater.

The Federal Government Has Plenary, Exclusive Authority over Radiological Safety Concerns Related to Uranium Milling and Tailings Management

33. The economic, environmental, and national security interests implicated by domestic uranium production make it a matter of singularly national concern. Recognizing this, Congress declared in the Atomic Energy Act ("AEA") that "[t]he development, utilization, and control of atomic energy for military

and for all other purposes are vital to the common defense and security," and the "processing and utilization" of nuclear source material like uranium "must be regulated in the *national* interest." 42 U.S.C. § 2012(a), (d) (emphasis added).

34. Like any other human activity, uranium development is not without risk. The milling and tailings management processes each raise their own discrete set of radiological health and safety concerns. Small amounts of radon and radioactive dust and fluid are created by the *milling* process and could affect the surrounding environment if not properly contained. And *tailings* must be securely stored, to prevent any radioactive materials from escaping into the air, leaking into the groundwater, and being released to surface waters.

35. All of these risks may be controlled within acceptable levels through the use of modern mining technology and compliance with the relevant NRC regulations. One independent study concluded, for example, that if the uranium beneath Coles Hill were developed according to best practices, the most-exposed resident of the area surrounding the operation would be exposed to only an additional 7.8 millirems of radiation annually. SENES CONSULTANTS LTD., ASSESSMENT OF RISK FROM URANIUM MINING IN VIRGINIA S-2 (1984), https://goo.gl/mRxxtK (last visited Aug. 5, 2015). That amounts to a tiny fraction of the 620 millirems of radiation the average American is exposed to each year, and the marginal health risks are similarly negligible.

36. Indeed, Virginia is currently home to a wide variety of nuclear activities that potentially pose a far higher radiological safety risk than uranium development at Coles Hill ever could. In Lynchburg, for example, the energy company Babcock & Wilcox produces nuclear fuel for the United States Navy. The uranium used in this fuel is highly enriched to 90% or above, orders of magnitude higher than the naturally occurring materials that would be processed and stored at Coles Hill. AREVA, a global player in nuclear energy, also has a facility in Lynchburg, where it does research and development, and maintenance on its nuclear reactors. Until recently, AREVA also manufactured commercial nuclear fuel in Lynchburg. In addition, the defense contractor Northrop Grumman operates a shipyard in Newport News, where it designs and builds nuclear-powered naval vessels. Finally, over a third of the Commonwealth's electricity is supplied by the four nuclear power plants that operate in Virginia – two in North Anna and another two in Surry. Virginia has thus long embraced the presence of nuclear facilities and activities within its borders, making the judgment that the marginal radiological safety risk they pose is far outweighed by their many benefits. And compared to many of these activities, the risk associated with developing the uranium at Coles Hill is simply negligible.

37. More importantly, Congress has concluded that the health and safety issues associated with uranium development – like the benefits – are national in scope and for the most part must be managed on the

national level. While Congress has left safety regulation of the *mining* process to the States, *it has made the radiological safety of the milling and tailings management processes exclusively matters of federal concern.*

38. Operation of a uranium mill requires licensure by the NRC, licensure that is subject to compliance with the detailed health-and-safety regulations that have been promulgated under the AEA by the NRC. *See* 10 C.F.R. § 40.31(h); 10 C.F.R. Pt. 40, App. A. For example, NRC regulations require a mill operator to employ strict "emission controls" to ensure that "all airborne effluent releases," such as "emissions from yellowcake drying and packaging operations" are "reduced to levels as low as is reasonably achievable." *Id.* Such control devices "must be operative at all times during drying and packaging operations and whenever air is exhausting from the yellowcake stack." *Id.* The performance of the emission control equipment must be checked and logged hourly. To further control the release of radioactive materials during milling, the tailings that come out of the mill "must be wetted or chemically stabilized to prevent or minimize blowing and dusting to the maximum extent reasonably achievable." *Id.* The milling operations must be managed so as to ensure that the surrounding area is not exposed to radiation that exceeds strict quantitative limits set by regulation.

39. Operation of a uranium tailings management facility similarly requires a license by the NRC, and is thus subject to its regulatory jurisdiction. 10

C.F.R. § 40.31(h). The design, construction, and operation of a tailings management facility likewise must comply with detailed and extensive regulations promulgated by the NRC. 10 C.F.R. Pt. 40, App. A. Satisfaction of the NRC's criteria is guaranteed initially by the requirement that an applicant "clearly demonstrate" in its application for a license to operate a mill and tailings management facility that it meets each of the NRC's standards. *Id.* And long-term compliance with those standards is guaranteed by the requirement that "[f]inancial surety arrangements must be established by each mill operator before the commencement of operations to assure that sufficient funds will be available to carry out the decontamination and decommissioning of the mill and site and for the reclamation of any tailings or waste disposal areas." *Id.*

40. The NRC's regulations govern, as an initial matter, *where* a tailings management facility may be constructed. Potential sites must be judged in light of the goal of "permanent isolation of tailings and associated contaminants by minimizing disturbance and dispersion by natural forces, and . . . without ongoing maintenance." *Id.* The NRC lists several features of potential sites that contribute to this goal – including "[r]emoteness from populated areas" and the "[p]otential for minimizing erosion, disturbance, and dispersion by natural forces over the long term" – and requires that the selection of the ultimate tailings-management site be based on "an optimization to the maximum extent reasonably achievable in terms of these features." *Id.* Moreover, the facility "may not be

located near a capable fault that could cause a maximum credible earthquake larger than that which the impoundment could reasonably be expected to withstand." *Id.*

41. The NRC requires that a tailings disposal facility either be placed below grade "in mines or specially excavated pits," or in an above-grade facility that is designed to "provide reasonably equivalent isolation of the tailings from natural erosional forces." *Id.* The facility must be designed to minimize erosion due to rainfall and flooding and to provide "good wind protection." *Id.* "A full self-sustaining vegetative cover must be established or rock cover employed to reduce wind and water erosion to negligible levels." *Id.* And all surfaces "must be contoured to avoid areas of concentrated surface runoff or abrupt or sharp changes in slope gradient." *Id.*

42. The NRC regulates the design and manufacture of the liner that must be placed at the bottom of the tailings storage facility "to prevent any migration of wastes out of the impoundment to the adjacent subsurface soil, ground water, or surface water." *Id.* The liner must be "[c]onstructed of materials that have appropriate chemical properties and sufficient strength and thickness," it must be placed on a "foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift," and it must "cover all surrounding earth likely to be in contact with the wastes or leachate." *Id.* To ensure that the liner is functioning

effectively, the operator must implement a groundwater "detection monitoring program" designed "to detect leakage of hazardous constituents from the disposal area." *Id.*

43. The NRC also regulates the design and construction of the cap or cover that is placed over the tailings storage cell once operations are complete. The cover must be made out of earth or an approved alternative, and it must be engineered so as to provide "reasonable assurance" that it will control the release of radon gas and other radioactive materials within strict, specified limits "for 1,000 years, to the extent reasonably achievable." *Id.* The operator of the facility must "verify through appropriate testing and analysis that the design and construction of the final radon barrier is effective" as soon as possible after the cover is in place; and after operations are complete, "annual site inspections must be conducted by the government agency [(ordinarily, the Department of Energy)] responsible for long-term care of the disposal site to confirm its integrity and to determine the need, if any, for maintenance and/or monitoring." *Id.*

44. The NRC has thus subjected the design, construction, operation, and long-term maintenance of a uranium tailings management facility to strict, extensive, and detailed regulation. And the NRC has made the judgment that compliance with these regulatory requirements will provide adequate protection against the health and safety risks associated with tailings management.

45. Accordingly, pursuant to the AEA's delegation of regulatory authority, the NRC has promulgated regulations that strike a certain balance. On the one hand, in pursuit of health, safety, and environmental concerns, the NRC has put in place strict standards that anyone who wishes to operate a uranium milling or tailings management facility must meet. On the other hand, recognizing that development of domestic uranium deposits carries substantial *benefits* – in terms of national security, economic growth, and the production of clean, independent energy – the NRC has determined that uranium *can* be milled, and its tailings *can* be stored, if its regulatory requirements are satisfied.

46. Whether the balance that the NRC's regulations strike between these competing values is the optimal one is a matter for the federal government to decide, not Virginia.

47. Congress in the AEA, as amended, has provided a narrow route for States to take over limited aspects of the NRC's regulatory authority. Under 42 U.S.C. § 2021, the NRC is authorized to "enter into agreements with the Governor of any State" to transfer to that State its regulatory jurisdiction over uranium milling and tailings management. *Id.* § 2021(b). The agreement process is arduous. Before entering into an agreement with a State, the NRC must ensure that the State program is "compatible" with the federal regulations that would otherwise apply and is "adequate to protect the public health and safety with respect to the materials covered by the . . . agreement." *Id.* § 2021(d)(2).

It typically takes the NRC three to five years to verify that a State program provides adequate levels of protection.

48. Once such an agreement is finalized – and only then – "the State shall have authority to regulate the materials covered by the agreement for the protection of the public health and safety from radiation hazards." *Id.* § 2021(b). *Unless and until* such an agreement is finalized, a State can regulate uranium development only "for purposes *other than* protection against radiation hazards." *Id.* § 2021(k) (emphasis added).

49. While Virginia has entered into a limited agreement with the NRC, that agreement *explicitly does not cover* uranium milling or tailings management.

50. Because Virginia's agreement does not cover uranium milling and tailings management, the clear terms of the AEA confine it to regulating uranium development "for purposes other than protection against radiation hazards" related to those activities. *Id.*

51. Congress has completely occupied the field of radiological safety concerns, except in those limited areas expressly carved out for the States. States may regulate mining safety, but they cannot address radiological safety concerns related to uranium milling and tailings management unless they reach an agreement with the NRC transferring to them jurisdiction over those activities. Subject to those narrow exceptions, any regulation of uranium development that is

grounded in radiological safety concerns falls squarely within the exclusively federal field.

Virginia's Moratorium on Uranium Mining Injures Plaintiffs by Unlawfully Prohibiting Them from Obtaining the Permits They Need To Mine Their Uranium

52. In order to legally mine any mineral in Virginia, one needs to obtain several permits from the Commonwealth's agencies.

53. First, Virginia by law requires anyone who wishes to "engage in any mining operation in Virginia" to first obtain a mining permit from the DMME. VA. CODE § 45.1-181. An application for such a permit must include a variety of information about the mineral to be extracted, the land where the mining operations would occur, and the identity of the owners of the land and the operator of the mine, and it must be accompanied by an application fee and a plan of operation that includes a proposal for reclaiming the land after operations have concluded.

54. Second, Virginia's Mine Safety Act requires anyone who "engage[s] in the operation of any mineral mine within this Commonwealth" to obtain – also from the DMME – a Mine Safety permit. *Id.* § 45.1-161.292:30. The application for a Mine Safety permit must identify the mine operator, any agent in charge of the business operation of the mine, and each independent contractor working at the mine; and it

must include information "[t]hat is relevant to an assessment of the safety and health risks likely to be associated with the operation of the mine." *Id.* § 45.1-161.292:32.

55. Third, Virginia regulations require anyone seeking to construct a major new stationary source of certain air pollutants to obtain a Prevention of Significant Deterioration permit from the DEQ. 9 VA. ADMIN. CODE §§ 5-50-10 through -420; 5-60-10 through -370.

56. Fourth, by state regulation an entity planning to construct a major new source of certain hazardous air pollutants – including radionuclides like radon – must first obtain a Major Source of Hazardous Air Pollutants, or "Article 7," permit, also from the DEQ. *Id.* § 5-80-1420.

57. Fifth, state law implementing the federal Clean Water Act requires an individual to obtain a Virginia Pollutant Discharge Elimination System permit from the DEQ before discharging effluents into state waters. VA. CODE § 62.1-44.5; 9 VA. ADMIN. CODE § 25-31-10 through -940.

58. Sixth, Virginia's Hazardous Waste Management Act requires any person storing, treating, or disposing of hazardous waste to first obtain a Hazardous Waste Management Facility permit from the DEQ. VA. CODE § 10.1-1426.

59. Until it applies for and receives each of these permits and licenses, Virginia Uranium is legally prohibited from mining the uranium in the Coles Hill

deposit. But Defendants, collectively, will not even *accept* an application by Virginia Uranium for any one of these permits, because state law, since 1982, has provided:

> Notwithstanding any other provision of law, permit applications for uranium mining shall not be accepted by any agency of the Commonwealth prior to July 1, 1984, and until a program for permitting uranium mining is established by statute.

VA. CODE § 45.1-283.

Virginia's Moratorium Is Grounded in Radiological Safety Concerns Related to Tailings Management

60. The law recognizes that States can oppose development of nuclear-related facilities and activities out of a variety of concerns, ranging from economic considerations, to environmental impacts, to health and safety issues. But the law also recognizes that this reality – that States rarely act with a singular justification or to promote a singular purpose – cannot be allowed to frustrate judicial inquiry into whether the State's policy has entered a field of exclusive federal jurisdiction. "If that were the rule, legislatures could nullify nearly all unwanted federal legislation by simply publishing a legislative committee report articulating some state interest or policy – other than frustration of the federal objective – that would be tangentially furthered by the proposed state law." *Entergy*

Nuclear Vermont Yankee, LLC v. Shumlin, 733 F.3d 393, 416 (2d Cir. 2013) (internal quotation marks omitted). Accordingly, where, as here, a state prohibition on uranium development is grounded in radiological safety concerns – that is, where these preempted concerns are a motivating or predominant justification for the State's action – then that action itself falls within the field occupied by federal law and is invalid.

61. Virginia's bar on accepting any "permit applications for uranium mining," VA. CODE § 45.1-283, is grounded squarely within the field of radiological safety concerns that has been completely occupied by federal law. The Commonwealth was motivated by these impermissible reasons when it imposed and then extended the uranium ban in the period from 1981 through 1986, and it was motivated by the same preempted considerations when it reconsidered but ultimately declined to lift the ban in the period from 2008 to 2013.

62. Virginia first moved to regulate uranium in 1981. Marline Uranium Corporation ("Marline") discovered the Coles Hill deposit in 1978, and throughout the late '70s Marline acquired leases of the mineral rights to the deposit and took steps to begin developing it. In reaction to Marline's discovery and apparent intent to mine the uranium beneath Coles Hill, the General Assembly in the 1981 session passed Resolution 324, calling on the Coal and Energy Commission ("CEC") – a legislative-branch commission comprised of members of the Assembly and citizen representatives – to create a "Uranium Subcommittee" tasked

with "evaluat[ing] the environmental effects of uranium exploration, mining and milling . . . and any possible detriments to the health, safety, and welfare of Virginia citizens which may result from uranium exploration, mining or milling." Act of Feb. 20, 1981, H.J. Res. 324, 1981 Va. Acts 1404, attached as Exhibit 1. The preamble to Resolution 324 made clear that the Assembly was acting out of concern for "the environmental effects and the possible hazards to the health, safety, and welfare of citizens living in proximity to uranium operations." *Id.* And the subsequent course of the public debate over uranium mining in the early 1980s confirmed that the Commonwealth's primary motivation lay squarely within the field of concerns that Congress has marked off as exclusively federal.

63. In 1982, after an initial round of study, the Uranium Subcommittee recommended that Virginia take the initial step of allowing exploration for uranium ore within the Commonwealth. Based on this recommendation, the Assembly adopted Senate Bill 179, which allowed *exploration* for uranium but simultaneously imposed a moratorium on *mining* uranium until July 1, 1983, to give the Commonwealth an opportunity for further study. In the bill's "declaration of policy," the Assembly reiterated its concern for "the health, safety, and general welfare of the citizens of this Commonwealth," and concluded that "the adoption of additional statutes during the 1983 Session of the General Assembly may be necessary in order to assure that any uranium mining and milling which may occur in the Commonwealth will not adversely affect

the environment or the public health and safety." Act of Apr. 7, 1982, ch. 269, 1982 Va. Acts 426, 427, attached as Exhibit 2.

64. In 1983, after further study by the subcommittee, the Assembly extended the moratorium through 1984 at the earliest "and until a program for permitting uranium mining is established by statute" – the current form of the moratorium. Act of Feb. 24, 1983, ch. 3, 1983 Va. Acts 3, attached as Exhibit 3. The Assembly also simultaneously created a Uranium Administrative Group ("UAG") to conduct a more in-depth "evaluation of the costs and benefits" of "uranium mining and milling activity in the Commonwealth." *Id.*

65. The UAG proceeded to retain a consulting firm, SENES, to conduct a thorough and technical study of the risks and benefits of uranium mining in Virginia. The SENES study concluded that the benefits of mining uranium in Virginia far outweighed the risks. After the SENES firm reported its conclusions, the UAG recommended to the CEC that further research be undertaken, and in January 1984 the CEC created yet another entity, the Uranium Task Force ("UTF"), to undertake this additional research. After evaluating the SENES study, undertaking further research, and holding a series of public meetings, the UTF issued a report in October of 1984 recommending that the Assembly lift the moratorium and allow uranium mining, subject to robust regulation. *See* REPORT OF THE URANIUM TASK FORCE 2 (Oct. 1, 1984), https://goo.gl/Gt90pw (last visited Aug. 5, 2015).

66. In the beginning of 1985, the UAG issued a final report to the CEC, based on the SENES study and the UTF report. REPORT OF THE VIRGINIA COAL & ENERGY COMM'N TO THE GOVERNOR AND THE GENERAL ASSEMB. OF VIRGINIA App. B, S. Doc. No. 15 (1985), http://goo.gl/b5L1vn (last visited Aug. 5, 2015). The UAG's final report again recommended that the moratorium be lifted. The UAG report was supported by 16 of the 18 members of the group. A dissent to the majority's recommendation was filed by Elizabeth H. Haskell.

67. Ms. Haskell's dissent was based almost exclusively on the potential threats to safety posed by tailings management. The dissent begins by citing "[t]he risks of cancer deaths and illnesses from radiation released from the uranium ore and waste products called tailings." *Id.* In particular, Ms. Haskell worried that because Virginia has a "climate where rainfall exceeds evaporation," the risk that water that "is discharged from the site and filters through tailings" might be transmitted "to people through streams and the groundwater is a major issue." *Id.*

68. This point that Virginia's "net precipitation climate" raises special concerns about the radiological safety of uranium development has remained one of the main objections put forward by opponents of lifting the ban ever since Ms. Haskell first raised it in 1985. Because it is specifically based on the concern that Virginia's wet climate could make it difficult to contain the radioactivity of the uranium *tailings*, it is squarely grounded in the exclusively *federal* field of concern.

69. Ms. Haskell next argued that the report issued by SENES was flawed for several reasons; again, the majority of those reasons were firmly grounded in safety concerns related to tailings management. The dissent asserted that the SENES report erroneously assumed "that there will be no leaching of radioactive wastes or heavy metals to groundwaters" and "no long-term deterioration or collapse of the 100 foot high tailings pile by flood, earthquake, erosion or design failure for the thousands of years the tailings are radioactive." Ms. Haskell thought the possibility of such leaching or deterioration more likely "in the net precipitation climate of Pittsylvania County, where groundwater reaches close to the surface and where above-ground tailings disposal will be required exposing the waste to weather and collapse." *Id.* Ms. Haskell also argued that SENES did not take into account several additional health risks, including the "[e]ffects of a catastrophic event such as a flood, major accident or design failure that could collapse the tailings pile." *Id.* And she claimed that the SENES cost-benefit analysis failed to appreciate that the "risks and costs" of uranium development will "occur for many years after closure of the mine and mill," because "[a]fter closure, the Commonwealth or the Federal Government will assume permanent ownership of the tailings pile," exposing it to the risk of "catastrophic events" like "a flood or earthquake" that would require "a very expensive tailings remedy." *Id.* Taken together, these "unknowns and . . . identified risks to the public and the environment . . . call for retaining the moratorium on mining and milling." *Id.*

70. Another member of the UAG – Frank E. Wallwork – also filed a brief dissent, making many of the same points as Ms. Haskell. In summarizing his "reasons for rejecting the conclusion of the [UTF]," his primary objection was this one: "The technology to prevent seepage of radionuclides, heavy metals, or chemicals from the tailings area into the ground water has not been developed." *Id.*

71. The CEC forwarded the UAG's report, along with the dissents, to the Governor and General Assembly, including its own recommendation that draft legislation lifting the moratorium at least be considered. The General Assembly decided not to follow the UAG's recommendation, and in 1986, the bill that had been filed seeking to end the moratorium was withdrawn.

72. In short, *both* of the advisory bodies created and tasked by the Assembly with studying uranium development *recommended* that the moratorium on uranium mining be lifted; the principal objection to those recommendations came from Ms. Haskell's dissent, which focused almost exclusively on the radiological safety concerns raised by tailings management. The Assembly adopted Ms. Haskell's recommendation rather than the majority's for the reasons she expressed.

73. In 1986, Marline began to wind up its plans to develop the Coles Hill deposit, ultimately abandoning the project and its leasehold interests in the uranium in 1990.

74. From 2008 to 2013, Virginia again considered whether to allow the development of the Coles Hill uranium deposit. Once again, the opponents to uranium development succeeded in keeping the ban in place. And once again, Virginia's refusal to allow uranium mining was squarely – and impermissibly – grounded in radiological safety concerns, primarily related to tailings management.

75. In 2007, the Coles and Bowen families established Plaintiff Virginia Uranium, Inc., and conveyed to it leasehold interests in the mineral estate beneath their land. That same year, Virginia Uranium applied for and received a permit from the DMME to engage in "exploration activity" to gain further information about the nature and extent of the Coles Hill deposit. Virginia Uranium also began to urge lawmakers to reconsider the ban on uranium mining. Plaintiffs pursued relief through the political process, attempting to persuade the Commonwealth to lift its ban on uranium rather than forcing it to defend the ban in court.

76. In 2008, the General Assembly formally began reconsideration of the ban on uranium development. Later that year, the Coal and Energy Commission re-created the Uranium Subcommittee, tasking it with examining the issue in depth.

77. In August 2009, the Subcommittee commissioned two studies to assess anew the costs and benefits of uranium development in Virginia. First, the National Academies of Science ("NAS") was asked to conduct a comprehensive, scientific study of health and

safety risks posed by uranium development. Second, the Chmura consulting firm was asked to study the likely socioeconomic impacts on the region.

78. The NAS reported its conclusions in 2011. The NAS Report is a comprehensive, 300-page assessment of every conceivable health and safety risk associated with uranium development. While the NAS study analyzed a wide variety of safety risks, the dominant concern emphasized by the study related to tailings management. For example, the NAS concluded that "[p]rotracted exposure to radon decay products generally represents the *greatest radiation-related health risk* from uranium-related mining and processing operations," and that "[i]n many cases, *tailings represent the predominant source* of radon emission . . . from a mining site." NATIONAL RESEARCH COUNCIL, URANIUM MINING IN VIRGINIA 123, 143 (2011), http://goo.gl/cv0cg (last visited Aug. 5, 2015) (emphases added). And "[a]long with exposure to radon . . . , inadequate containment of uranium tailings most likely represents the highest potential source of radiation exposure, related to uranium mining activities, to the general public." *Id.* at 128.

79. Throughout the 2009-11 period, opposition to lifting the ban centered on radiological safety issues. Some opponents released their own studies of the likely effects of uranium development. For example, in February 2011, the City of Virginia Beach emerged as a major opponent of lifting the ban, even though it is located hundreds of miles from the Coles Hill property.

The City released an extensive study it had commissioned on the "Potential Impacts of Uranium Mining in Virginia on Drinking Water Sources." This study "focused on the potential of a catastrophic failure of a uranium-tailings containment structure and subsequent discharge of uranium tailings into the Banister or Roanoke Rivers." MICHAEL BAKER, INT'L, A PRELIMINARY ASSESSMENT OF POTENTIAL IMPACTS OF URANIUM MINING IN VIRGINIA ON DRINKING WATER SOURCES ES-1 (2011), http://goo.gl/efjNFB (last visited Aug. 5, 2015). The study concluded that such a failure "could significantly increase radioactivity concentrations in the river/reservoir system . . . for an extended period of time," affecting all of the residents whose drinking water is drawn from those sources. *Id.* at ES-7. This 300-page study is focused exclusively on the radiological safety risks posed by tailings management.

80. The Virginia Beach study was repeatedly cited by the individuals and interest groups that opposed lifting the ban during this period, giving it an extraordinarily wide influence on the public debate.

81. Groups opposed to uranium development also produced a mass of non-technical literature. The resolutions, flyers, internet posts, newspaper op-eds, brochures, videos, position papers, and comments at public forums demonstrate that those who opposed uranium development in Virginia focused almost exclusively on tailings-related safety concerns.

82. A number of cities and local governments or authorities passed formal resolutions opposing the

effort to lift the ban; the bulk of these were trained on concerns about tailings management. The City of Chesapeake, for example, urged that "the mining and milling of the Uranium Reserve poses a risk of environmental contamination in the event the containment structures for the tailings fail due to structural defect, substantial flooding or other cause." City of Chesapeake, *Resolution Requesting that the Virginia General Assembly Maintain the Current Moratorium on Uranium Mining Until the Completion of Scientific Studies Evaluating the Risk of Contamination of Drinking Water Supplies and Harm to the Public Health* (June 1, 2011), http://goo.gl/PB67nI (last visited Aug. 5, 2015). The City of Norfolk adopted a similar resolution, opining that "it is absolutely clear, based upon the National Academy of Sciences and other studies, that it cannot be demonstrated to a reasonable degree of certainty that there would be no significant release of radioactive sediments downstream of the Coles Hill site under any circumstances." City of Norfolk, *A Resolution Stating the City of Norfolk's Opposition to the Mining of Uranium in the Commonwealth of Virginia* (Jul. 24, 2012), http://goo.gl/EG9hHb (last visited Aug. 5, 2015).

83. The less formal statements of the private groups that coalesced in opposition to lifting the ban are to similar effect. For example, one umbrella group of mining opponents, Keep the Ban, published a flyer stating that "[u]ranium mining and processing produces waste materials known as 'tailings' commonly found to include radium, thorium and various harmful

heavy metals linked to severe health effects. The Coles Hill site would generate at least 28 million tons of mine and mill waste." It urged readers to tear-off and mail in an attached petition asking state officials "to maintain the ban in order to preserve our drinking water" from the "radioactive and toxic waste [that] would be left in Virginia soils for centuries." *See* Brochure, *Keep the Ban on Uranium Mining in Virginia*, KEEP THE BAN, http://goo.gl/Q3Lm3y (last visited Aug. 5, 2015).

84. The Southern Environmental Law Center ("SELC") was another leading opponent of lifting the ban. Like Keep the Ban, the SELC's dominant concern related to tailings management. For example, a position paper published on SELC's website cites the NAS study as validating its concerns related to "risks to water quality from radioactive tailings," and it cites the Virginia Beach study as demonstrating "that a catastrophic failure of a uranium waste containment structure at the site could contaminate the city's drinking water for as long as two years." *Uranium Mining – A Risky Experiment*, SOUTHERN ENVTL. LAW CTR., https://goo.gl/BksD2J (last visited Aug. 5, 2015). As Cale Jaffe, the senior SELC attorney on the Virginia Uranium project, put it in late 2012, milling and tailings management was "the driving issue" in the public discourse: "You're dealing with a significant amount of mill tailings waste that retains about 85 percent of its radioactivity. . . . Managing that for the long term is what's driving the debate." Mary Beth

Jackson, *Milling 'Driving Issue' of Uranium Controversy*, THE DANVILLE REGISTER & BEE, Dec. 11, 2012, http://goo.gl/iaqGZO (last visited Aug. 5, 2015).

85. A third major opposition group, the Virginia chapter of the Sierra Club, was motivated by similar concerns. For example, a flyer sent to local residents at the end of 2010 warned that "[u]ranium mining is a dirty and dangerous business. It creates toxic waste that can leak into our drinking water causing kidney failure and birth defects." Exhibit 4. And a statement on their website warns that "[i]f the ban is lifted and mining commences, left behind will be up to 29 million tons of waste containing radioactive material, which has been linked to kidney disease, cancers, leukemia, and birth defects. Potential water contamination with these toxins could cripple downstream communities and the industries that rely on clean water." Eileen Levandoski, *HOT WATER Film Reveals Burning Truth About Uranium Mining*, VIRGINIA CHAPTER SIERRA CLUB, Nov. 6, 2013, http://goo.gl/3Ms2Lw (last visited Aug. 5, 2015).

86. The arguments advanced and steps taken by the *supporters* of uranium development provide further evidence that the dispositive issue in the public debate was the concern over the radiological safety risks posed by tailings.

87. To aid the Assembly in considering whether to lift the moratorium, Governor McDonnell in January 2012 created a Uranium Working Group ("UWG") to consider the extant research and issue a report

summarizing for the Assembly the major scientific concerns and the regulatory steps that would need to be taken should the moratorium be lifted. The UWG was comprised of leading staff from the three Virginia agencies concerned with health, safety, and environmental quality: the DMME, the DEQ, and the Virginia Department of Health. The UWG issued its report in November 2012, which concluded that "[i]f the General Assembly decides to lift the . . . moratorium, the need for a comprehensive program to regulate uranium mining . . . *can be met.*" URANIUM WORKING GROUP, 2012 REPORT xiii (2012), http://goo.gl/qrjOiz (last visited Aug. 5, 2015) (emphasis added). That report went on to map out the steps Virginia's Assembly and agencies would need to take to effectively regulate uranium development. In 2013, a bill was introduced into both the Senate and the House that would have lifted the moratorium and allowed uranium development, subject to stringent regulation based on the recommendations of the NAS and UWG studies. Notably, this legislation provided that "[a] mining permit application shall not be accepted" unless it specified that "all by-product materials, including tailings, will be disposed of below grade at the site where such disposal is to occur." S. 1353, § 45.1-285.18(G)(ii) (2013 Sess.), attached as Exhibit 5.

88. This requirement of below-grade tailings disposal was based on the NAS study, which highlighted this disposal technique as limiting the risk that groundwater and surface water could be contaminated by the tailings. The requirement was touted by the Senate

sponsor of the legislation, John C. Watkins, as "directly address[ing]" the "primary environmental concern raised [by opponents]" that the "mill tailings . . . [might] taint drinking waters downstream." John C. Watkins, *Uranium Can Be Mined Safely in Virginia*, RICHMOND TIMES-DISPATCH, Jan. 21, 2013, http://goo.gl/nUcecQ (last visited Aug. 5, 2015).

89. Ultimately, the argument that the tailings left over from uranium mining would expose millions of area residents to radioactive drinking water proved dispositive. At the end of January 2013, Senator Watkins withdrew his bill.

90. There is no doubt about what motivated the Virginia State legislators who opposed lifting the ban, for many of them publicly explained the reason for their opposition: concerns related to uranium tailings. Delegate Danny Marshall, for example, explained his opposition in 2012 by pointing to the "'tailings' left behind with radioactivity that could take thousands of years to dissipate. . . . Heavy rains and high winds could spread those radioactive materials over long distances, perhaps to other states. . . ." *Uranium Likely to be Hot Topic*, THE MARTINSVILLE BULLETIN, Dec. 19, 2012, http://goo.gl/UmwHLe (last visited Aug. 5, 2015). Delegate Kenneth Plum justified his stance by pointing to the Virginia Beach study's "finding that a catastrophic failure of a uranium waste containment structure at the site could contaminate the city's drinking water for as long as two years." Kenneth R. Plum, *Uranium Mining in Virginia*, THE CONNECTION, Jul. 10, 2012, http://goo.gl/j3emmq (last visited Aug. 5,

2015). Senator Barbara Favola similarly noted that "I simply can't believe [storing radioactive material underground is safe], because it's going to be stored underground for a very long time . . . And you're talking about radio-active material getting into people's groundwater." Michael Pope, *Uranium Debate Heats Up As Virginia Assembly Session Begins*, WAMU 88.5, Jan. 7, 2013, http://goo.gl/IOOaB0 (last visited Aug. 5, 2015). And Delegate Don Merricks, one of the most vocal opponents of lifting the ban, repeatedly emphasized tailings-related concerns, noting explicitly at one point that "he is not so concerned about the mining as he is about the tailings – the radioactive debris that remains after the uranium has been extracted." Alix Hines, *Is Uranium Mine Scaring People from Southside?*, CAPITAL NEWS SERVICE, Jan. 17, 2013, http://goo.gl/J7QFb8 (last visited Aug. 5, 2015).

91. The November 2013 election of Defendant Governor McAuliffe, who ultimately became resolutely opposed to uranium development, dashed any hopes of reintroducing a bill lifting the moratorium in the next session. The reasons cited by Governor McAuliffe in articulating his opposition to uranium development provide final, conclusive confirmation that the Commonwealth's refusal to lift the ban was squarely grounded in radiological safety concerns related to tailings.

92. Then-candidate McAuliffe came out against uranium mining as early as March 2013, noting that he "would need to be certain that mining uranium can

be done safely and cleaned up completely before a moratorium is lifted. . . . So far I have not seen that." *Cuccinelli, McAuliffe Weigh in on Uranium Mining*, THE VIRGINIA PILOT, Mar. 19, 2013, attached as Exhibit 6.

93. In a May meeting with mining opponents, McAuliffe stated that uranium mining was "a horrible idea." *McAuliffe: No to Uranium Mining*, MARTINSVILLE BULLETIN, May 22, 2013, http://204.12.9.147/article.cfm?ID=37752 (last visited Aug. 5, 2015). His campaign noted that his opposition was based on "concerns that water sources could be threatened by mining or natural events and that mining and milling couldn't be cleaned up completely" – concerns that echo the Virginia Beach study.

94. Shortly after the election, Governor McAuliffe stated unequivocally that he would veto any attempt to lift the ban. The reason he gave for the veto threat – "I'm afraid it would get into the drinking water" – confirms beyond doubt that the motivating cause in Virginia's continued refusal to permit uranium mining was the safety concerns related to tailings management. Jeff E. Schapiro, *McAuliffe Looks to Bury Uranium Issue*, RICHMOND TIMES-DISPATCH, Nov. 13, 2013, http://goo.gl/DgGEPb (last visited Aug. 5, 2015).

95. And in a recent speech to state businessmen, Governor McAuliffe indicated that his position had not changed. "The risk is too high. Show me some science that says our water will absolutely be protected, and

I'll consider it." Travis Fain, *McAuliffe on Bills, Campaign Season, Cuba, Uranium, and Clinton*, DAILY PRESS, Mar. 17, 2015, http://goo.gl/VqM7m5 (last visited Aug. 5, 2015).

96. This mass of evidence shows that both in the 1980s and in the period from 2008-2013, Virginia's decision to impose, extend, and retain an outright ban on any uranium development in the Commonwealth was almost exclusively based upon radiological safety concerns related to tailings management. Were it not for those concerns, the moratorium would have been lifted.

97. The true design and function of Virginia's ban on uranium mining, then, is to act as an absolute bar on the construction of a tailings management facility in the Commonwealth, even if that facility is designed, made, and operated in a way that meets or even exceeds the stringent regulatory requirements promulgated by the NRC. In this way, Virginia's ban on uranium mining frustrates – and indeed, is *impossible to square with* – the NRC's judgment that uranium tailings can be managed and stored safely, if the appropriate precautions are taken.

The Uranium Mining Ban's Effects on Plaintiffs' Property Rights

98. Because of Virginia's ban on uranium mining, Defendants are barred by law from even accepting

Virginia Uranium's application for the permits, described in paragraphs 53-58 above, which are required to legally mine the uranium in the Coles Hill deposit.

99. Plaintiffs' uranium deposit – worth approximately $6 billion if mined – is plainly worth *nothing* if it can never be extracted from below the ground. By preventing Plaintiffs from legally mining their uranium, Virginia's ban has thus dramatically injured Plaintiffs by draining their property rights of essentially all value. Indeed, Plaintiffs are injured each day Defendants refuse to process, or even to *accept*, applications for mining permits to develop and make beneficial use of the uranium beneath their land.

100. Virginia Uranium has already expended substantial sums in pursuing its plans to mine uranium at Coles Hill. For example, it has spent over $800,000 on the process of applying for a uranium exploration permit from the DMME and conducting exploratory drilling of the Coles Hill deposit pursuant to that permit. It has spent nearly $2 million on advance technical research of its own and another $2 million on commissioning third-party studies to develop the technical details, analyze the safety and environmental risks, and assess the economic costs and benefits of developing the uranium beneath Coles Hill. It has spent about $1.2 million on preliminary environmental sampling of the ground and surface water surrounding the site – the bulk of which went above and beyond the sampling required by Virginia's permitting process. And it has invested over $10 million in setting up and maintaining office space and hiring employees. All of

these up-front investment costs are wholly deprived of value unless Virginia's ban on uranium mining is lifted.

101. While – as with any major development project – Virginia Uranium will need to meet additional regulatory milestones, such as obtaining permits from the NRC, before beginning mining operations at Coles Hill, there is a strong likelihood that those additional milestones can be met. Indeed, the substantial investments Plaintiffs have already made in the Coles Hill project – even in the face of Virginia's blanket ban – demonstrate that they intend to take whatever steps the law requires to see the project through. Virginia's ban is the only obstacle that amounts to *an absolute bar* to mining uranium. That ban deprives Plaintiffs of even the *opportunity* of developing the valuable deposit of uranium beneath their land.

CLAIM FOR RELIEF

COUNT I

Federal Preemption of Virginia's Moratorium on Uranium Mining

102. Plaintiffs incorporate by reference the allegations of the preceding paragraphs.

103. The Constitution makes federal law "the supreme Law of the Land," U.S. CONST. art. VI, cl. 2, and any state law that is contrary to federal law is preempted and thus invalid under the Supremacy Clause.

104. State law is preempted by federal law either if it falls within a field that is completely occupied by federal law or if it directly conflicts with a provision of federal law. State law directly conflicts with federal law either if it is physically impossible to comply with both federal and state law or if state law stands as an obstacle to the full accomplishment and execution of the purposes and objectives of federal law.

105. By passing the AEA, Congress has preempted the field of radiological safety concerns. The safety of uranium milling and tailings management is a matter of exclusively federal regulatory jurisdiction, and any state regulation of uranium development that is grounded in radiological safety concerns related to the areas of *federal* regulation fall within the field preempted by the AEA.

106. Nonetheless, Virginia has since 1982 imposed and maintained a flat ban on uranium mining. That ban is thoroughly grounded in radiological safety concerns primarily related to the management and storage of uranium tailings. Accordingly, it falls within the field preempted by the AEA and is invalid under the Supremacy Clause.

107. Congress enacted the AEA to encourage the development of nuclear resources and generation of atomic energy in the national interest, but subject to safety standards established by the NRC. The AEA, and the regulations promulgated by the NRC pursuant to it, thus strike a particular balance between the objectives of promoting uranium development and

ensuring health, safety, and environmental protection. That balance contemplates that uranium development should not be barred on the basis of safety concerns, including those related to uranium milling and tailings management, so long as the federal regulatory standards governing those activities are satisfied.

108. Defendants' enforcement of Virginia's ban on uranium mining, based on a directly contrary weighing of the safety risks, upsets the balance struck by the AEA and thus poses an obstacle to the full implementation and execution of the purposes and objectives of federal law. Accordingly, the ban is preempted by federal law and invalid under the Supremacy Clause.

109. Pursuant to the authority Congress delegated it in the AEA, the NRC has promulgated extensive regulations governing radiological safety, including specifically regulations governing tailings management. Those regulations allow uranium tailings to be safely managed and stored, so long as federal standards are met.

110. Virginia's uranium ban, however, flat-out prohibits the safe management of uranium tailings, by prohibiting the mining of uranium in the first place. Moreover, because Virginia enacted and maintains its ban on uranium mining because of radiological safety concerns primarily related to tailings management, that state law is intended and specifically designed to function as a ban on storing uranium tailings within

the state. It is physically impossible to develop uranium in Virginia and simultaneously comply with both federal law, which regulates but allows the storing of uranium tailings, and Virginia's law, which effectively bans storing uranium tailings. Accordingly, Virginia's ban is preempted by federal law and invalid under the Supremacy Clause.

PRAYER FOR RELIEF

111. WHEREFORE, Plaintiffs pray for an order and judgment:

a. Declaring that Virginia's ban on uranium mining, VA. CODE § 45.1-283, is preempted by federal law, invalid under the Supremacy Clause, and devoid of any legal force or effect;

b. Enjoining Defendants and their employees and agents from complying with Virginia's ban on uranium mining;

c. Ordering Defendants and their employees and agents, respectively, to accept and process Plaintiffs' applications for the following permits and licenses notwithstanding Virginia's ban on uranium mining and in the same manner as they would if those permits and licenses pertained to any other mineral that may be legally mined:

(i) A Mining permit from the DMME,

(ii) A Mine Safety permit from the DMME,

(iii) A Prevention of Significant Deterioration permit from the DEQ,

(iv) A Major Source of Hazardous Air Pollutants permit from the DEQ,

(v) A Virginia Pollutant Discharge Elimination System permit from the DEQ, and

(vi) A Hazardous Waste Management Facility permit from the DEQ;

d. Awarding Plaintiffs their reasonable costs, including attorneys' fees, incurred in bringing this action; and

e. Granting such other and further relief as this Court deems just and proper.

Dated: August 5, 2015

Respectfully submitted,

/s/ Michael Weitzner

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**Pro hac vice* application forthcoming

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APPENDIX

Public Statements by Members of Virginia's General Assembly Between 2009 and 2014 Opposing Lifting the Ban on Uranium Mining.

Del. Leslie R. Adams

Adams opposes lifting the state's ban on uranium mining. Virginia Uranium has been lobbying for an end to the ban so that it could mine a 119-million-pound uranium deposit in Coles Hill in Pittsylvania County. . . . Adams said he is against lifting the ban because there is not a consensus that uranium mining can be done here safely.

Adams: Create the Climate for Jobs, MARTINSVILLE BULLETIN, Oct. 31, 2013, attached to Ohlendorf Decl. as Exhibit 51.

The two Republicans vying for their party's nomination for the 16th District House of Delegates seat in the June 11 primary have different perspectives on how they can help rejuvenate Southside's economy. . . . Adams and Bowman both said they do not support lifting the statewide ban on uranium mining and milling. . . . The candidates alluded to a lack of studies showing that uranium could be mined without potentially harming the environment or public health. People have a right to do what they want with property they own, Adams said. However, "when use of those rights affect health safety," it is time for the government to step in, he said. The candidates then were asked if there might be a scenario in which they would

change their opinions on the uranium issue. There is no sufficient evidence that uranium "tailings" can be stored safely, Adams responded. Who knows what information might be presented in the future, he said. But any decision on whether uranium should be mined in Southside ultimately should be made by the region's residents, and state officials – especially those from other areas – should recognize that, he emphasized.

Mickey Powell, *Adams, Bowman Debate Issues*, MARTINSVILLE BULLETIN, May 24, 2013, attached to Ohlendorf Decl. as Exhibit 52.

Sen. Kenneth C. Alexander

Virginia has maintained a 30-year ban on uranium mining for serious and nondebatable reasons. Not only does the mining process produce a granular radioactive byproduct that poses a long-term containment risk, the immediate dangers to Virginia's aquifers and surface water are considerable. The site in Pittsylvania County, proposed by Uranium Mining Inc., would give us not only Virginia's first uranium mine, but the only active uranium mine east of the Mississippi River.

These factors are significant. Virginia's first uranium mine would be developed at a place that sharply contrasts with sites of active uranium mines out West. Those mines are predominantly situated in dry, sparsely populated regions of the United States and away from major tributaries. Mining at the proposed Virginia site has the potential to impact water, soil,

and air quality for hundreds of thousands of families who live downriver and downwind.

Our environment is a unique and priceless public good. Its purpose is to sustain everyone and not merely the interests of a few. Citizens should have a say in its stewardship, especially when the impact transcends regions and generations. Given what we all know, the decision-making process concerning uranium mining in Virginia should be transparent and conducted in good faith. . . . The current market price for uranium is hovering above $50 per pound. This is far below its five-year peak of $136.22 per pound experienced in June 2007; however, mining uranium still presents significant job and economic development opportunities. A study completed by Chumara Economics and Analytics found that a proposed project to mine uranium in Pittsylvania County has the potential to create more than 1,000 total jobs and generate more than $110 million in tax revenue for the commonwealth. We can expect the total economic impact over the mine's lifetime to approach $5 billion.

Just as important are the environmental costs, which are difficult to forecast and impossible to recoup. It is worth considering that in 1979, a dam that serviced the reservoir for New Mexico's Church Rock uranium mine collapsed spilling 90 million gallons of radioactive liquid and 1,100 tons of waste from uranium tailings into the Puerco River. This event impacted ranches and farmland as far as 50 miles into neighboring Arizona. Though technologies have improved and

more comprehensive best practices have been implemented, disasters such as this are as hard to predict as they are to prevent. An event of similar scale in Pittsylvania County would impact the environment and economy by tenfold.

Senator Kenneth Cooper Alexander, *Uranium Mining*, http://senatorkermethcalexander.com/issues/uranium-mining, attached to Ohlendorf Decl. as Exhibit 53.

Sen. George Barker

Virginia's Coal and Energy Commission is recommending that the General Assembly consider overturning a longstanding ban on uranium mining this legislative session. . . . Arlington Sen. Barbara Favola says the economic benefit to struggling Pittsylvania County is not enough to warrant the potential damage created by overturning the ban. She says she has a hard time trusting arguments that storing radioactive material underground is a good idea in the long run. "I simply can't believe that, because it's going to be stored underground for a very long time," Favola says. "And you're talking about radioactive material getting into people's groundwater." . . . Fairfax County Sen. George Barker remains undecided. "Clearly, some of the concerns have been addressed with the proposal to put it all underground," Barker. "Whether that's adequate to resolve it, I don't have an opinion on that yet."

Michael Pope, *Uranium Debate Heats Up As Virginia Assembly Session Begins*, WAMU 88.5, Jan. 7, 2013, attached to Ohlendorf Decl. as Exhibit 34.

Del. John Cosgrove

It's four hours from Norfolk, and is nowhere near reality yet, but the potential of a uranium mine 50 miles from one of Hampton Roads' main freshwater supplies has local leaders preparing for a fight this legislative session. . . . State Del. John Cosgrove, R-Chesapeake, was one of several lawmakers Virginia Uranium sent to France to tour a uranium mine. The goal was to allay their fears of the process. Originally not opposed to the idea, Cosgrove said this week that he thinks the risks are too great to lift the moratorium. "Even the smallest amount of contamination could ruin us," he said.

Clay Barbour & Jillian Noilin, *Legislative Battle Heating Up over Va. Uranium Mining*, THE VIRGINIAN-PILOT, Nov. 24, 2012, attached to Ohlendorf Decl. as Exhibit 54.

Del. John Cosgrove, R-Chesapeake, received gifts and trips valued at $15,775 – almost as much as his $17,640 annual salary as a delegate. . . . The bulk of the largesse directed at Cosgrove was the $12,449 spent by Virginia Uranium, the company lobbying to establish a uranium mine in Pittsylvania County. The company sent Cosgrove and several other lawmakers to visit a mine site in France.

The purpose of the trip, Cosgrove said, was to reassure the Virginia legislators that uranium could be mined safely with no chance of contaminating Lake Gaston, a major source of Hampton Roads' drinking water that lies downstream from the proposed mine site. But the trip convinced him of the exact opposite, Cosgrove said.

"They never showed us beyond any doubt that there couldn't be some catastrophic effect on our drinking water," he said. "I came back thinking that uranium mining is probably not in the best interest of Hampton Roads."

Bill Sizemore, *Gifts & Trips for Virginia Legislators*, THE VIRGINIAN-PILOT, Feb. 8, 2012, attached to Ohlendorf Decl. as Exhibit 50.

Del. Glenn R. Davis

I have voted twice to keep the moratorium against uranium mining because of the risk that it could endanger the water that Virginia Beach depends on for the health and economy of our citizens. Our energy solutions should include drilling offshore for natural gas in an environmentally safe manner that does not conflict with our partners in the military. We also should continue moving forward with alternative energy options including wind and solar power. These technologies hold much more promise for domestic energy production and Virginia Beach job creation than uranium mining does.

Voter Guide 2013 – House of Delegates 84th District, THE VIRGINIAN-PILOT, Oct. 27, 2013, attached to Ohlendorf Decl. as Exhibit 55.

Sen. Creigh Deeds

As a candidate for governor, I've laid out a comprehensive plan to meet our future energy needs and reduce Virginia's dependence on foreign oil. . . . While I believe nuclear power should be part of a comprehensive approach to energy here in the commonwealth, I also strongly believe that the moratorium on uranium mining should remain in place until scientists determine that uranium mining does not pose a risk to the health and safety of any Virginian.

The climate of Southside Virginia poses particular challenges to the safe mining of uranium. Because it often rains, there is a risk that radioactive material produced by uranium mining and processing could leach into groundwater. If such leaching occurred, it could contaminate water supplies and endanger Virginians all over Southside, from Danville to Virginia Beach. . . . As your governor, I will ensure that our energy future is not only plentiful and clean, but also safe for all Virginians.

Senator Creigh Deeds, Letter, MARTINSVILLE BULLETIN, Nov. 1, 2009, attached to Ohlendorf Decl. as Exhibit 56.

Creigh Deeds said Wednesday that if he is elected governor in November, he expects to fulfill the state's commitment to complete the widening of U.S. 58 across southern Virginia. . . . He also said he supports the study of uranium mining in Pittsylvania County but "the proof threshold is high" to allow such mining in the commonwealth.

"I don't see how you can mine uranium in any area of Virginia. There's too much rainfall. How do you develop a liner and cap that will protect tailings from contaminating the groundwater?" asked Deeds, who formerly lived in Danville.

Ginny Wray, *Deeds: Transportation, Cooperation Are Key*, MARTINSVILLE BULLETIN, May 28, 2009, attached to Ohlendorf Decl. as Exhibit 57.

Deeds said that energy independence is a part of our national security so he believes in a comprehensive approach, and nothing should be taken off the table. He said, though, that he is not convinced that we have the technology to make such mining safe.

Deeds said, when the issue came up in committee, he asked two questions, one he knew the answer to and the other he didn't. The questions were:

1. What about the terrain in Pittsylvania County has changed?

2. What about the science has changed?

The answer to question #1, which Deeds already knew, was nothing. The terrain is such that the mining may very well contaminate the groundwater and not just in Pittsylvania County. The problem could very well extend beyond, down to Hampton Roads.

As for #2, he would like to see a study done by the National Academy of Sciences. . . . The other issue is that of radioactive waste. Deeds was quite concerned about this, saying that radioactivity lasts forever, and even if

the technology exists to clean it up – which he was very skeptical of this being the case – the stigma of having radioactive waste in an area may be too much to overcome. Unless the technology exists to make uranium mining safe, I think I understood Deeds' position to be that he would not support it.

Sen. Creigh Deeds Talks Sense on Uranium Mining, SOUTHSIDE VIRGINIA AGAINST URANIUM MINING (Aug. 7, 2009), attached to Ohlendorf Decl. as Exhibit 58.

Del. Bill DeSteph

Should Virginia end the uranium mining moratorium?

We cannot embark on any legislation that could result in endangering our water supply. Virginia Beach worked too hard for too long to make sure the Lake Gaston pipeline came to fruition. Any actions that could possibly jeopardize our water supply must be rejected.

Voter Guide 2013 – House of Delegates 82nd District, THE VIRGINIAN-PILOT, Oct. 27, 2013, attached to Ohlendorf Decl. as Exhibit 59.

Sen. Adam Ebbin

One notable bill that was scheduled to be heard in last week's meeting of the Agriculture, Conservation and Natural Resources Committee was a measure that would have lifted Virginia's 30-year moratorium on uranium mining. Our climate is distinctly different

than that of most locations where uranium is currently mined, and I believe that lifting the ban could have posed serious threats to the Southside Virginia water table and resulted in other significant environmental concerns. After counting the votes of members of the Agriculture, Conservation and Natural Resources members, including mine, the patron of the legislation decided to strike the bill, laying the issue to rest for this session.

Senator Adam Ebbin, *Medicaid Expansion, Transportation and Uranium Ban*, MOUNT VERNON PATCH, Feb. 5, 2013, attached to Ohlendorf Decl. as Exhibit 60.

Environmental groups have been critical of uranium mining because of concerns over a radioactive byproduct known as "tailings," a sand-like substance left over after the uranium is milled. Some legislators say they are concerned that the radioactive byproduct could flow downstream into the Hampton Roads area. That means Pittslvania County could see the economic benefits while the Hampton Roads area has to deal with the pollution.

"I don't want to sell the public health at any price," said state Sen. Adam Ebbin (D-30). "We should be serious about other kinds of economic development besides dirty energy."

Michael Lee Pope, *Uranium Money Spreads Across Virginia in Radioactive Debate*, ALEXANDRIA GAZETTE PACKET, Nov. 27, 2012, attached to Ohlendorf Decl. as Exhibit 61.

Del. James E. Edmunds, II

The proposed Coles Hill uranium site in Pittsylvania County is located about a mile from the 1 Banister River, which flows on through Halifax County, eventually into Buggs Island Lake. The Banister is part of the Roanoke River Basin and this river has been named as one of the 2011 10 most endangered rivers in the United States because of its proximity to the proposed mine. . . . I had the privilege of speaking to an ecology class at Halifax County High School concerning some of the dangers of uranium mining. I hope that I was able to alert them to be vigilant on this issue.

Delegate James E. Edmunds II, Letter to the Editor, CHATHAM STAR-TRIBUNE, Apr. 11, 2012, attached to Ohlendorf Decl. as Exhibit 62.

A state wide fundraiser is being organized in hopes of raising $100,000 in opposition of uranium mining. Delegate James Edmunds will host the fundraiser on his Halifax County farm this September. . . . "If we're wrong with uranium mining we are wrong forever. There is no whoops we messed up there, you've ruined a lifestyle and generations of living in this part of the state, and I'm just not prepared to give that up yet," he said.

Delegate Organizing Anti-Uranium Fundraiser, WSET, June 28, 2012, attached to Ohlendorf Decl. as Exhibit 63.

Delegate James Edmunds is taking a huge stand against uranium mining by hosting a fundraiser at his

home Sept. 15 in hopes of raising $100,000 to fight the ban to lift a 30-year state moratorium on uranium mining. . . . He said it was important to keep the ban on uranium mining because of its impact on the public.

"All the studies done on uranium mining have indicated that there is no 100 percent assurance that it can be done safely. The same thing can be said when you step outside in the morning, but the difference here is if we are wrong and our water, air, and soil get contaminated, we're wrong forever," Edmunds said.

He explained the upkeep of the uranium mine could become costly, and he questions where the money will come from to pay someone to monitor the uranium landfills that must be monitored forever after mining has begun.

Edmunds said the stigma of uranium mining has already hurt economic development and property value in the area.

Danielle Vaughn, *Delegate Raising Money to Keep Ban on Uranium Mining in Place*, HALIFAX-GAZETTE-VIRGINIAN, July 31, 2012, attached to Ohlendorf Decl. as Exhibit 64.

Bills introduced last week would lift a moratorium on uranium mining at the site here, known as Coles Hill. Political supporters say that the mining would bring economic benefits and that risks from radioactive wastes, or tailings, can be safely managed. Opponents fear the contamination of drinking water in case of an accident, and a stigma from uranium that would deter

people and businesses from moving to the area. . . . Delegate James E. Edmunds II, a Republican, said that in the event that radiation leaked into the groundwater, his district would be one of the first affected. "There's no waiting for a big rain to clean it up," he said. "I'm not going to have that as my legacy."

Trip Gabriel, *Rift Widens over Mining of Uranium in Virginia*, N.Y. TIMES, Jan. 19, 2013, attached to Ohlendorf Decl. as Exhibit 65.

[A] quintet of lawmakers – senators Frank Ruff of Clarksville and Don Merricks of Chatham, and delegates Tommy Wright, James Edmunds and Danny Marshall, representing communities from Lunenburg to Danville – wrote a letter to fellow legislators asking in no uncertain terms that any attempt to lift the moratorium be delayed.

December 28, 2011

Dear Colleague,

I hope each of you had a great Christmas and are looking forward to 2012!

The National Academy of Sciences report on uranium mining has been released, following similar reports by Chmura Economics, the Danville Regional Foundation, Virginia Beach and others. . . . The reports are long and detailed. Parts are dense and complex. What they are not is boring. These reports deserve to be read, particularly the Academy's sections on the risks to public health and the environment. . . . The serious threats

that the Academy outlines deserve to be thoroughly absorbed and extensively debated by the public and knowledgeable contributors before any decisions are made. . . . With respect to the reports themselves, a few observations are appropriate. All such reports are shaped around a set of guiding assumptions. In these cases, those assumptions include:

- The establishment and use by the company of internationally best practices in all areas.
- The use of best technology, whatever the cost.
- The development and establishment and financing of a credible regulatory structure.
- The assumption that there will be no consequential management failures, system or machinery failures, human error, external or unexpected events.

Assumptions are just that, of course. There is no guarantee that best practices will be utilized. There is no certainty that best technologies will be employed, particularly if they prove to be significantly more expensive or constraining. Both the Academy and Chmura make it clear there is no state or federal regulatory scheme or expertise in place remotely sufficient to monitor or regulate this industry.

An even larger concern is the inability to address adequately those events that are unknown and unknowable as to time and circumstance. History teaches that human error and/or system failures are inevitable. The

unexpected happens. Design flaws show up after the fact. The Academy cannot predict what or when or how but anyone who has worked in complex industrial operations knows that things will go wrong. Mistakes occur, hurricanes and earthquakes will happen. One only has to read the newspaper to see the catastrophic consequences of the failure of operations that were designed and operated and regulated by the best and the brightest. Three Mile Island, Chernobyl, the Challenger, Fukushima, Union Carbide come quickly to mind – the question is not if these events will occur, but when and at what cost.

It is notable that even assuming best practices and best technology and extensive regulation, the reports detail serious consequences to human health and the environment that can be expected. It is not difficult to conclude the Academy is sending clear warning signals that mining and processing uranium in a wet climate subject to flooding and extreme weather events in a densely populated area is a very, very bad idea . . .

I close with the quote attributed to Paul Locke, chairman of the Academy committee that produced the report. . . . "The report didn't say you can mitigate all risks. It said you can mitigate some risks".

We are being asked to push through a proposal to lift a thirty-year old ban on an industry with an abysmal environmental record that, under the most optimistic assumptions, experts conclude the most that can be expected is to reduce some of the quite serious risks to the health and welfare of the surrounding community.

How on earth can a responsible person take that gamble?

Tom McLaughlin, *Holding Pattern*, S. BOSTON NEWS & RECORD & MECKLENBURG SUN, Jan. 25, 2012, attached to Ohlendorf Decl. as Exhibit 66.

Sen. John S. Edwards

The company that wants to mine uranium in Virginia is supporting a bill in the upcoming General Assembly calling for regulations to govern the proposed mining, according to lobbyists for Virginia Uranium. The move is widely seen by environmentalists and others as a way to authorize the mining while avoiding an up or down vote on the controversial project.

. . . Virginia state Sen. John Edwards, D-Roanoke, who opposes the mine, says the vote on regulations is an attempt to shift the focus away from a more difficult debate.

"I can see how those who want to promote the uranium mine would rather argue over the details of regulation than the bigger question of can you do it safely and protect public health and safety, the question of should we do it at all," Edwards says.

Rose Ellen O'Connor, *End Run: Supporters of Uranium Mining in Virginia Push Bill to Effectively Lift the Ban Without an Up or Down Vote*, NATURAL RESOURCES NEWS SERVICE, Nov. 19, 2012, attached to Ohlendorf Decl. as Exhibit 67.

Del. David Englin

A company seeking to mine what is thought to be the largest uranium deposit in the United States flew several Virginia state legislators to France last month as part of a lobbying campaign to get the state to overturn its ban on mining the radioactive material. . . . As a committed environmentalist, I believe there is great value in seeing mining sites and operations and their aftermath firsthand, and in hearing the other side's best and strongest case that uranium can be extracted safely from the site in south-central Pittsylvania County without contaminating the land, air and drinking water nearby. . . . Uranium mines elsewhere are primarily in arid geographies. The sites in France and Virginia are in fertile, moist areas, surrounded by agriculture and close to rivers that supply drinking water to major communities. Uranium deposits elsewhere are in sandy soil and loose rock, while deposits in France and Virginia are ensconced in granite. . . . In addition to touring mine sites in and around Bessines, we met with the local mayor and town manager and spoke with an area farmer. We asked them how mining affected the environment, public health and agriculture as well as air and water quality and safety in the region.

David Englin, *Virginia Del. David Englin Explains Why He Accepted a Trip to France*, THE WASHINGTON POST, July 1, 2011, attached to Ohlendorf Decl. as Exhibit 93.

Sen. Barbara Favola

Virginia's Coal and Energy Commission is recommending that the General Assembly consider overturning a longstanding ban on uranium mining this legislative session. . . . Arlington Sen. Barbara Favola says the economic benefit to struggling Pittsylvania County is not enough to warrant the potential damage created by overturning the ban. She says she has a hard time trusting arguments that storing radioactive material underground is a good idea in the long run. "I simply can't believe that, because it's going to be stored underground for a very long time," Favola says. "And you're talking about radioactive material getting into people's groundwater."

Michael Pope, *Uranium Debate Heats Up As Virginia Assembly Session Begins*, WAMU 88.5, Jan. 7, 2013, attached to Ohlendorf Decl. as Exhibit 34.

Northern Virginia may be hundreds of miles away from the Southside community where a family business is seeking to overturn a longstanding ban on uranium mining in Virginia. But the toxic politics of uranium is red-hot throughout the state as members of the General Assembly arrive in Richmond this week. . . . Most of the delegation from Northern Virginia is strongly opposed to overturning the ban, which has been in place since 1982. . . . "There's a big division within the business community about whether this is a good thing or a bad thing," said Sen. Barbara Favola

(D-32). "Those that are involved in tourist-type activities do not believe that removing the ban is a good thing."

Supporters of uranium mining say burying the waste in Pittsylvania County is a reasonable compromise to allay concerns about contaminated groundwater. But opponents fear that the technology is still emerging, and they don't want legislators gambling with the health of millions of people. If the groundwater in Pittsylvania is contaminated, opponents fear, people downstream in the Hampton Roads area might suffer. . . . The issue pits economics against environmentalism because lifting the ban would add jobs and economic development to a struggling part of the state. A recent study from the George Mason Center for Regional Analysis at George Mason University concluded that overturning the longstanding ban would bring more than $1 million to Pittsylvania County, adding about 2 percent to the county's revenue base. . . . "There are only 300 jobs generated," said Favola. "And I have to believe over time that many of those jobs would be automated."

Michael Lee Pope, *Toxic Politics: Northern Virginia Delegation Split on Uranium Mining*, THE CONNECTION, Jan. 10, 2013, attached to Ohlendorf Decl. as Exhibit 68.

Sen. Mark Herring

Over the past year, I've had the opportunity to meet with interested stakeholders on both sides of the debate over whether to end the ban on uranium mining and milling in Virginia. I have carefully considered their positions, as well as the scientific evidence, and I have concluded that ending the ban on uranium mining and milling is not the right course for our Commonwealth. . . . The health and safety of the public, and of the environment, should be of paramount concern when considering issues such as this and I am simply not convinced that uranium mining can be conducted in Southside Virginia in a safe and environmentally responsible way. I take very seriously the concerns raised by citizens, business leaders and local officials in both Southside and Hampton Roads who have expressed to me their fears with regard to the potential for negative public health impacts, particularly water supply contamination.

Loudoun Democrats, *Herring Opposes Lifting Ban on Uranium Mining*, LOUDOUN CNTY. DEMOCRATIC COMM., Dec. 19, 2012, attached to Ohlendorf Decl. as Exhibit 36.

Del. Patrick Hope

The Virginia League of Conservation Voters (VALCV) has endorsed Delegate Patrick A. Hope (D-Arlington) for re-election to the Virginia General Assembly . . . "The health risks associated with uranium mining are well-documented and too great to ignore. Lifting the

moratorium on uranium mining would be like playing Russian roulette with the health and safety of tens of thousands of Virginians. I'm not willing to do that now or ever."

Virginia League of Conservation Voters Endorses Delegate Patrick Hope for Re-Election, HOPE FOR VIRGINIA.ORG (June 20, 2011), attached to Ohlendorf Decl. as Exhibit 69.

Del. Kaye Kory

On at least one important issue – the question of whether or not Virginia will overturn the ban on uranium mining – a bipartisan group of legislators in the House of Delegates and the Senate will be working together. This group intends to ensure that all significant risks to public health, safety, and the economy will be fully factored into the ultimate decision.

My Republican colleague, Del. James Edmunds II, who represents the 60th District in Southside Virginia, prepared a thoughtful letter to fellow legislators urging the utmost caution in addressing what he calls "the most important public policy issue for the session." His letter is based on several studies, including a report issued in December by National Academy of Sciences (NAS) that details the technical, environmental, health, safety, and regulatory challenges posed by lifting the 30-year ban.

Though the National Academy team was not asked to make a recommendation, the report concludes that

there are "steep hurdles to be surmounted" to mitigate the risks of uranium mining. Edmunds and four other Southside Republican legislators who signed the letter live and work in the region of the commonwealth most affected by uranium mining. Based on the facts presented, they are clearly skeptical that any potential benefits could outweigh the significant risks that are simply beyond our ability to fully contain.

Del. Kaye Kory, *Kory's Report from Richmond: Major Environmental Issues on the Agenda*, ANNANDALE VA, Jan. 5, 2012, attached to Ohlendorf Decl. as Exhibit 70.

OPEN LETTER TO GOVERNOR MCDONNELL: DON'T ENDANGER OUR WATER SUPPLY!

Dear Governor:

I urge you to cancel your short-sighted plans to withdraw Virginia from the Interstate Commission on the Potomac River Basin (ICPRB). . . . I firmly believe that because some potential uranium mining sites would drain into the Occoquan and on into the Potomac, we should be seeking, not discarding, the technical capabilities and expertise available through the ICPRB as we face this vitally important environmental question in the upcoming session of the General Assembly.

Del. Kory to Gov. McDonnell: "Don't Endanger Our Water Supply!", BLUE VIRGINIA, Oct. 17, 2011, attached to Ohlendorf Decl. as Exhibit 71.

Del. K. Robert Krupicka, Jr.

Legislators across Virginia say they are being heavily lobbied on the issue of uranium mining, which is certain to become one of the hottest topics in the upcoming session of the General Assembly . . . Environmentalists say they are concerned about a radioactive byproduct of uranium mining known as "tailings," which they say can pollute downstream communities in the Hampton Roads area. Delegate Rob Krupicka says he'll vote against lifting the ban. "I don't disagree with the fact that this portion of the state needs economic development, but I also think that folks shouldn't have to sacrifice the health of their water or the long-term health of their community for jobs," says Krupicka.

Michael Pope, *Uranium Mining Could Prompt Radioactive Debate In Richmond*, WAMU 88.5, Nov. 19, 2012, attached to Ohlendorf Decl. as Exhibit 72.

Del. Alfonso Lopez

Yesterday I attended the Keep the Virginia Uranium Ban meeting at the Arlington Public Library. Though this is a complex issue with a lot of nuance, it is clear that the only appropriate response that protects public health is to keep the ban.

Uranium mining in the United States does not have a good record to begin with, and the proposed site of the first Uranium mine in Virginia poses spectacular risks. In the western United States, Uranium mining has

had the advantage of a relatively arid climate. The risk of Uranium and other toxic and radioactive materials entering the drinking water has been relatively low.

That is not the case in Virginia. The proposed site in Virginia lies in a FEMA designated flood plain. The company has also not yet provided their plan on how to deal with the 28 million tons of Uranium waste that would remain in Virginia. The risk of contamination (especially in the groundwater) is too great. . . . Fundamentally, there is no scenario in which it makes sense for Virginia to lift the ban on Uranium mining. In these discussions we must keep in mind the health and safety of our communities, now and for future generations. The EPA has said that the waste products of Uranium mining must be kept away from people for at least 1,000 years. It would be incredibly short-sighted to create a carcinogenic toxic legacy that will last into the next millennia.

Alfonso Lopez, *Keep the Ban*, ALFONSOLOPEZ.ORG (July 1, 2011), attached to Ohlendorf Decl. as Exhibit 73.

There is a very active movement taking place to begin mining for uranium in certain parts of the Commonwealth of Virginia. . . . I continue to believe that mining for uranium in Virginia is a bad idea. The U.S. EPA has stated that waste from uranium must be kept from human contact for one thousand (1,000) years. The mining projects will create several million tons of uranium waste that will have to be controlled with State resources. Since the sites are within regular flood

zones there is the potential to contaminate the groundwater for large segments of Virginia. At best, these projects will only create approximately 400 jobs.

Simply put – I do not believe that we should create a toxic, carcinogenic legacy for a millennium of future Virginians in order to realize a short term (approximately 25 years) economic benefit.

Alfonso Lopez, *Politics & Policy Along the Pike – Alfonso's Notes from Richmond*, ALFONSOLOPEZ.ORG (Jan. 18, 2012), attached to Ohlendorf Decl. as Exhibit 74.

Del. Manoli Loupassi

Legislation is now before the General Assembly to remove the ban on mining uranium. I do not believe it is in the best interests of the commonwealth and its citizens to remove the ban.

When the costs of mining uranium are weighed against the benefits, the decision is clear.

Many proponents of uranium mining allege that a refusal by the assembly to allow mining might somehow be a deprivation of private property rights. This analysis ignores the good neighbors of the Coles property, many of whom have owned family property for hundreds of years.

Should not their property rights be protected and respected? What about the devaluation of their property values and the effects on property owners who are downstream from the site? It is clear to me that local

neighbors, who do not want a hazardous waste site next to them, have property rights that deserve protection.

Arguments relative to energy independence are also unpersuasive. The market for any uranium mined in Virginia is not Virginia, or even the United States, alone. Uranium is like all other commodities – coal, natural gas, oil – and is sold on a global market.

In most cases, uranium is traded through contracts negotiated between a buyer and seller. Pricing can be as simple as a fixed price, or based on various reference prices with economic corrections built in. Nuclear energy producers will purchase uranium at the best price, not because it is produced in a particular location.

I have heard no outcry from the commonwealth's chief energy suppliers that this bill is either needed or required. Additionally, this is not oil; most of the uranium imported into the United States is provided by two of America's best allies and trading partners – Canada and Australia – and suggestions of harm to America's energy independence if uranium is not mined in Virginia is unpersuasive.

The anticipated economic benefits of the proposed mining operation are speculative. The operation of uranium mining is price-dependent. When prices are high, mines flourish. When prices drop, uranium mines close and uranium miners lose their jobs. During the Cold War, demand for uranium reached an all-time high

during the nuclear proliferation era. That high demand didn't last. The decline in the need for uranium at the end of the Cold War, paired with the discovery of a higher grade of uranium in Australia and Canada, created a drop in the price and the closure of mines and mills throughout the United States.

In 2001, there were only three operating mines in the United States. In 2007, with the announcement that Japan, Germany and France would begin phasing out the use of nuclear energy, uranium prices fell precipitously and mines closed. The "Boom to Bust to Boom to Bust" cycle is well-documented in the uranium mining industry, and has shown amazing consistency over the past 25 years.

The economic consequences for the local region in the event of a long-term price-driven production disruption cannot be ignored, particularly when local economic development professionals have openly suggested that the stigma of uranium mining and milling could have a chilling effect on other kinds of business recruitment for the region.

Environmental concerns are not to be ignored. The property in question is within two miles of 250 privately owned artesian wells. The Coles property is drained by Mill Creek, which empties to the Kerr Lake Reservoir, the second largest freshwater reservoir in the United States and supplies water to nearly 1.2 million people.

Finally, there is almost unanimous opposition among my colleagues in the House of Delegates and the Senate who represent the people in southern Virginia to removing the ban on uranium mining. It is revealing that the people who allegedly stand to gain the most economically from lifting the ban have expressed the greatest concern about the financial rewards promised by uranium mining. These leaders have reached the conclusion that supposed economic benefits do not outweigh the health, safety and economic risks that they are being asked to take.

Traditional local businesspeople and organizations in the region – such as the Danville/Pittsylvania Chamber of Commerce and the Halifax Chamber of Commerce – have come out in strong opposition to removing the ban on uranium mining. Our state's chief jobs creation officer, Lt. Gov. Bill Bolling, has recently announced his belief that the state's ban on uranium mining and milling must remain in place. Virtually every jurisdiction from Danville to the Atlantic Ocean has enacted a resolution in support of keeping the ban.

As I weigh the costs versus the benefits of uranium mining, I believe the risks of economic speculation, environmental concerns and the adverse affects on local property owners far outweigh the benefits cited by the bill's proponents. It is my intention to oppose this legislation and I will work in a bipartisan way to defeat the lifting of the ban on uranium mining.

Manoli Loupassi, *Loupassi: Don't Lift Uranium Mining Ban; Risks Outweigh Supposed Benefits*, RICHMOND

TIMES-DISPATCH, Jan. 25, 2013, attached to Ohlendorf Decl. as Exhibit 75.

Del. Danny Marshall

The possibility of lifting a 30-year ban on uranium mining in Virginia will be a hot topic in the 2013 General Assembly when it convenes Jan. 9, according to local lawmakers. It will be "a nuclear issue, no pun intended," Del. Danny Marshall, R-Danville, told local business leaders and government officials during the Martinsville-Henry County Chamber of Commerce's annual Pre-legislative Breakfast on Tuesday at the Virginia Museum of Natural History. . . . Three of the four lawmakers who spoke during the breakfast oppose uranium mining. By focusing on job creation, the company was "very smart in its approach" to try and convince people to favor repealing the ban, Marshall said. Yet based on his understanding of mining processes, Marshall said for every 2,000 pounds of materials mined, only a pound would be actual uranium. The rest would be "tailings" left behind with radioactivity that could take thousands of years to dissipate, he said. Heavy rains and high winds could spread those radioactive materials over long distances, perhaps to other states, according to Marshall.

Uranium Likely to be Hot Topic, THE MARTINSVILLE BULLETIN, Dec. 19, 2012, attached to Ohlendorf Decl. as Exhibit 32.

[A] quintet of lawmakers – senators Frank Ruff of Clarksville and Don Merricks of Chatham, and delegates Tommy Wright, James Edmunds and Danny Marshall, representing communities from Lunenburg to Danville – wrote a letter to fellow legislators asking in no uncertain terms that any attempt to lift the moratorium be delayed.

December 28, 2011

Dear Colleague,

I hope each of you had a great Christmas and are looking forward to 2012!

The National Academy of Sciences report on uranium mining has been released, following similar reports by Chmura Economics, the Danville Regional Foundation, Virginia Beach and others. . . . The reports are long and detailed. Parts are dense and complex. What they are not is boring. These reports deserve to be read, particularly the Academy's sections on the risks to public health and the environment. . . . The serious threats that the Academy outlines deserve to be thoroughly absorbed and extensively debated by the public and knowledgeable contributors before any decisions are made. . . . With respect to the reports themselves, a few observations are appropriate. All such reports are shaped around a set of guiding assumptions. In these cases, those assumptions include:

- The establishment and use by the company of internationally best practices in all areas.

- The use of best technology, whatever the cost.

- The development and establishment and financing of a credible regulatory structure.

- The assumption that there will be no consequential management failures, system or machinery failures, human error, external or unexpected events.

Assumptions are just that, of course. There is no guarantee that best practices will be utilized. There is no certainty that best technologies will be employed, particularly if they prove to be significantly more expensive or constraining. Both the Academy and Chmura make it clear there is no state or federal regulatory scheme or expertise in place remotely sufficient to monitor or regulate this industry.

An even larger concern is the inability to address adequately those events that are unknown and unknowable as to time and circumstance. History teaches that human error and/or system failures are inevitable. The unexpected happens. Design flaws show up after the fact. The Academy cannot predict what or when or how but anyone who has worked in complex industrial operations knows that things will go wrong. Mistakes occur, hurricanes and earthquakes will happen. One only has to read the newspaper to see the catastrophic consequences of the failure of operations that were designed and operated and regulated by the best and the brightest. Three Mile Island, Chernobyl, the Challenger, Fukushima, Union Carbide come quickly to

mind – the question is not if these events will occur, but when and at what cost.

It is notable that even assuming best practices and best technology and extensive regulation, the reports detail serious consequences to human health and the environment that can be expected. It is not difficult to conclude the Academy is sending clear warning signals that mining and processing uranium in a wet climate subject to flooding and extreme weather events in a densely populated area is a very, very bad idea . . .

I close with the quote attributed to Paul Locke, chairman of the Academy committee that produced the report. . . . "The report didn't say you can mitigate all risks. It said you can mitigate some risks".

We are being asked to push through a proposal to lift a thirty-year old ban on an industry with an abysmal environmental record that, under the most optimistic assumptions, experts conclude the most that can be expected is to reduce some of the quite serious risks to the health and welfare of the surrounding community. How on earth can a responsible person take that gamble?

Tom McLaughlin, *Holding Pattern*, S. BOSTON NEWS & RECORD & MECKLENBURG SUN, Jan. 25, 2012, attached to Ohlendorf Decl. as Exhibit 66.

Could Virginia's 30-year-long ban on uranium mining finally be lifted next year? It looks like the question will be foremost when the new General Assembly convenes next year on January 9. . . . But the skewed

refinement ratio of uranium remains a major concern. According to the Martinsville Bulletin, Del. Danny Marshall (R-Danville) points out that for every 2,000 pounds of mined materials, just about a pound would be viable uranium. This creates the major problem – massive amounts of radioactive waste.

Swagato Chakravorty, *Virginia Could Lift Uranium Mining Ban*, WEALTH DAILY, Dec. 20, 2012, attached to Ohlendorf Decl. as Exhibit 76.

Reactions are mixed to the Uranium Working Group's final report on what a regulatory framework would look like if the General Assembly were to lift the moratorium on uranium mining. . . . State Del. Danny Marshall, R-Danville, said he had yet read the UWG report. He encourages all people to read the report so they will be informed on the issue, which he expects will come up in the upcoming session of the General Assembly. "It's not just a Pittsylvania County issue; it really affects the whole state of Virginia," he said. Marshall said he opposes lifting the moratorium. "Our part of the state needs jobs," he said. But, "I think the stigma uranium mining would have on the whole region would be a detriment. I think it would hurt us more than help us."

Paul Collins, *Reactions to Uranium Mining Report Mixed*, MARTINSVILLE BULLETIN, Dec. 2, 2012, attached to Ohlendorf Decl. as Exhibit 77.

State Sen. John C. Watkins, R-Powhatan, confirmed Monday he will sponsor a bill in 2013 to lift Virginia's moratorium on uranium mining. . . . Delegate Danny

Marshall, R-Danville, says he has spoken with Watkins and disagrees with the senator. "It doesn't have to be the way he's doing it," Marshall said. "I think it's backwards, myself. I think there should first be a vote to lift the moratorium." . . . Marshall says he is still plodding through the report, but what he's read so far doesn't convince him that lifting the moratorium in [sic] the right thing to do.

"Everything's got a risk. Everything's got a reward," he said. "I think the risks are too high for the rewards."

Mary Beth Jackson, *State Senator to Sponsor Uranium Mining Legislation*, DANVILLE REGISTER & BEE, Dec. 3, 2012, attached to Ohlendorf Decl. as Exhibit 78.

Legislation to start the ball rolling on uranium mining at a Southside Virginia site rich with the radioactive mineral will be submitted in both chambers of the General Assembly. . . . "The risks far outweigh the reward that Pittsylvania County will receive, or that the state of Virginia will receive," said Del. Danny Marshall, a Danville Republican, who cited concerns about waste from milling, the process of separating uranium ore from rock, known as tailings, that would retain their radioactivity long after a mine would be decommissioned.

Julian Walker, *Va. Uranium Supporters Take Message to Richmond*, THE VIRGINIAN-PILOT, Jan. 11, 2013, attached to Ohlendorf Decl. as Exhibit 79.

Del. Bobby Mathieson

Six candidates for the House of Delegates flashed their green credentials Wednesday night to about 100 residents at a forum on environmental issues. . . . Republicans at the forum said it's important to explore uranium mining at a site in Pittsylvania County. "We've got to let the science play out," said Republican Ron Villanueva, a Beach councilman and defense contractor challenging Democrat Del. Bobby Mathieson, a retired police officer now working for a security firm. They're vying to represent the 21st District. Mathieson and other Democrats said the risk of the proposed mine contaminating Lake Gaston, Virginia Beach's water supply, is too great. "We spent too many years trying to get that water," he said.

Aaron Applegate, *Green Forum for House Candidates Spurs Talk About Oil*, THE VIRGINIAN-PILOT, Sept. 24, 2009, attached to Ohlendorf Decl. as Exhibit 80.

Del. Jennifer McClellan

One hotly contested issue is whether to lift the 30-year moratorium on uranium mining and milling in Virginia. . . . The National Academy of Science's study . . . noted that there is limited experience in the United States, and none in Virginia, with modern underground and open-pit uranium processing. Unlike the western states that mine uranium, Virginia's climate

is prone to flooding and groundwater contamination. . . . We can certainly expand nuclear energy capacity without the Cole's Hill uranium: Existing, known global uranium reserves provide more than a 50-year supply, and we have the technology to develop nuclear facilities powered by recycling nuclear waste. As for the jobs argument, the views of the citizens, businesses leaders, and elected officials in the region are instructive.

A majority of the people in Southern Virginia have expressed opposition to lifting the ban, including the area's legislators, local governments and the Danville Pittsylvania County Chamber of Commerce (in a column on today's Commentary front), concluding that the potential risks far outweigh the potential and yet unknown rewards.

These risks include the health impacts of exposure to uranium, contamination of drinking water from Pittsylvania County to Virginia Beach and negative impacts on the region's existing businesses, property values and ability to attract, retain and grow jobs.

The negative impacts from uranium mining and milling will far outlast the actual operation of the mine. The waste product of uranium mining, known as "tailings," retains significant amounts of uranium as well as by-products, such as radium and thorium, heavy metals including lead, arsenic, and mercury, and other toxic materials. The Coles Hill site is estimated to produce at least 28 million tons of uranium waste, which

will remain radioactive for thousands of years and need to be contained on-site indefinitely.

Failure of the waste storage facility could result in the contamination of local groundwater sources and downstream drinking water sources for more than 1.9 million people in Halifax, Virginia Beach, Norfolk, Chesapeake and North Carolina. The regulatory framework to govern the process could cost up to $5 million annually. . . . Nor is the impact of the mining and storage of uranium in Coles Hill restricted to the immediate geographic area.

For these reasons, the Virginia Municipal League, the Virginia Association of Counties, the Virginia Farm Bureau, the Fairfax and Fauquier Water Authorities, environmental organizations, and local governments from practically every community downstream from the proposed site, from Halifax to Virginia Beach, and the entire Roanoke River Basin community, all oppose lifting the ban. Even Lt. Gov. Bill Bolling, the tie-breaking vote in the Senate, recently announced his opposition to lifting the ban.

Jennifer McClellan, *McClellan: Virginia Can Live Without Uranium Mines*, RICHMOND TIMES-DISPATCH, Jan. 13, 3013 [sic], attached to Ohlendorf Decl. as Exhibit 81.

Del. Don Merricks

The possibility of lifting a 30-year ban on uranium mining in Virginia will be a hot topic in the 2013 General Assembly when it convenes Jan. 9, according to local lawmakers. It will be "a nuclear issue, no pun intended," Del. Danny Marshall, R-Danville, told local business leaders and government officials during the Martinsville-Henry County Chamber of Commerce's annual Pre-legislative Breakfast on Tuesday at the Virginia Museum of Natural History. . . . Three of the four lawmakers who spoke during the breakfast oppose uranium mining. . . . Del. Don Merricks, R-Pittsylvania County, said uranium is found throughout Virginia but studies have shown that the site the company wants to mine is the only potentially viable uranium mining location in the state. "I could live with the mine" itself, Merricks said. "The problem is the stuff that's left" after mining occurs, essentially forever. "I don't think we're ready for uranium mining," added state Sen. Bill Stanley, R-Glade Hill. "The risk is too great."

Uranium Likely to be Hot Topic, THE MARTINSVILLE BULLETIN, Dec. 19, 2012, attached to Ohlendorf Decl. as Exhibit 32.

The state delegate who represents the site of a proposed uranium mining and milling project in Pittsylvania County said Thursday that he remains opposed to lifting Virginia's moratorium on uranium mining, voicing concerns about the project's environmental and economic impacts.

"At this point in time, with so many unanswered questions, I don't think it is the right thing to write regulations or lift the ban on mining and milling uranium," said Del. Don Merricks, R-Chatham, during a panel discussion at the state Capitol. . . . Merricks said stringent regulations don't guarantee protection from environmental risks associated with milling uranium. He also raised concerns that the project could stigmatize a region that is struggling to revamp its economy and reduce high unemployment rates.

"There is no question in my mind that mining and milling will provide the potential for health risks and environmental contamination," Merricks said. "Even with the world's best practices in place and the most stringent regulations, the potential for contamination still exists." . . . Merricks said he remains concerned about the waste product, or tailings, that would be left over from the milling process. The company said it plans to store the tailings in secure, underground containment facilities to mitigate the risk of contamination. But Merricks, echoing concerns raised by environmental groups and other opponents, likened it to maintaining "a Superfund waste site forever."

Michael Sluss, *Del. Don Merricks Opposed to Mining Uranium*, THE ROANOKE TIMES, Dec. 6, 2012, attached to Ohlendorf Decl. as Exhibit 82.

When people come to Southside Virginia, Adam Lynch said, they are looking for nature, clean air, lakes and pretty mountains. . . .

Delegate Don Merricks, a Republican from Pittsylvania County, said he has talked to Realtors who are having trouble selling homes because the General Assembly is considering allowing uranium mining there.

That prospect is hurting private schools in the area, too. Merricks said Chatham Hall, a prestigious private school for girls, has noticed parents "shopping around" and putting their children elsewhere because of concerns about the proposed mine. . . .

Merricks said he personally supports the mining of uranium. However, he said the state should heed the wishes of local residents: If a clear majority of people oppose lifting the moratorium, Merricks says it should stay in place.

Merricks said he is not so concerned about the mining as he is about the tailings – the radioactive debris that remains after the uranium has been extracted.

According to federal law, Merricks said, the tailings must remain on the site where the milling occurred. The legislator fears what could happen to the tailings in a climate where hurricanes, tornadoes and earthquakes are a possibility. . . . Legislators such as Sen. John Watkins and Delegate Lee Ware, who represent districts on the outskirts of the Richmond area, are spearheading the drive to lift the moratorium against uranium mining.

"I was going to suggest that since Sen. Watkins from Powhatan and Delegate Ware of Powhatan are so adamant about doing this, why don't we just haul the ore

up there and mill it in Powhatan County?" Merricks said jokingly.

Alix Hines, *Is Uranium Mine Scaring People from Southside?*, CAPITAL NEWS SERVICE, Jan. 17, 2013, attached to Ohlendorf Decl. as Exhibit 35.

The process of taking solid rock containing uranium ore, crushing it and using chemicals to leech out the useful uranium – which is referred to as "milling" – is one of the more controversial parts of the uranium mining issue facing Pittsylvania County and Virginia. Cale Jaffe, senior attorney for the Southern Environmental Law Center, and Delegate Don Merricks, R-Pittsylvania County, sided with one another on the uranium milling issue during last week's recent panel discussion in Richmond, saying the "what-ifs" have not been sufficiently addressed. "It's the milling part of the process that gives me great pause and reservation," Merricks said. . . . Merricks added, "I do not like putting years of containment on citizens of the commonwealth." The leftover waste rock from the milling process – called tailings – would still be radioactive and would have to be monitored for generations. Jaffe, calling milling "the driving issue," agreed. "You're dealing with a significant amount of mill tailings waste that retains about 85 percent of its radioactivity," Jaffe said. "Managing that for the long term is what's driving the debate."

Mary Beth Jackson, *Milling 'Driving Issue' of Uranium Controversy*, THE DANVILLE REGISTER & BEE, Dec. 10, 2012, attached to Ohlendorf Decl. as Exhibit 30.

[A] quintet of lawmakers – senators Frank Ruff of Clarksville and Don Merricks of Chatham, and delegates Tommy Wright, James Edmunds and Danny Marshall, representing communities from Lunenburg to Danville – wrote a letter to fellow legislators asking in no uncertain terms that any attempt to lift the moratorium be delayed.

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An even larger concern is the inability to address adequately those events that are unknown and unknowable as to time and circumstance. History teaches that human error and/or system failures are inevitable. The unexpected happens. Design flaws show up after the fact. The Academy cannot predict what or when or how but anyone who has worked in complex industrial operations knows that things will go wrong. Mistakes occur, hurricanes and earthquakes will happen. One only has to read the newspaper to see the catastrophic consequences of the failure of operations that were designed and operated and regulated by the best and the brightest. Three Mile Island, Chernobyl, the Challenger, Fukushima, Union Carbide come quickly to

mind – the question is not if these events will occur, but when and at what cost.

It is notable that even assuming best practices and best technology and extensive regulation, the reports detail serious consequences to human health and the environment that can be expected. It is not difficult to conclude the Academy is sending clear warning signals that mining and processing uranium in a wet climate subject to flooding and extreme weather events in a densely populated area is a very, very bad idea . . .

I close with the quote attributed to Paul Locke, chairman of the Academy committee that produced the report. . . . "The report didn't say you can mitigate all risks. It said you can mitigate some risks".

We are being asked to push through a proposal to lift a thirty-year old ban on an industry with an abysmal environmental record that, under the most optimistic assumptions, experts conclude the most that can be expected is to reduce some of the quite serious risks to the health and welfare of the surrounding community. How on earth can a responsible person take that gamble?

Tom McLaughlin, *Holding Pattern*, S. BOSTON NEWS & RECORD & MECKLENBURG SUN, Jan. 25, 2012, attached to Ohlendorf Decl. as Exhibit 66.

Sen. Ralph Northam

Virginia can't risk, economically, a disaster or an accident with the mining. It would affect our water supplies. As a physician, I know what radiation does, and this is not something that we need to take a chance on.

Northam on the Issues, RICHMOND TIMES-DISPATCH, Aug. 18, 2013, attached to Ohlendorf Decl. as Exhibit 94.

I strongly oppose drilling for oil off the coast of Virginia, and am proud that I helped defeat attempts to lift the moratorium on uranium mining in the Commonwealth. I believe that it is both possible and necessary to achieve economic development that retains and improves the quality of our air, water, and land.

Northam for Lt. Governor, DEMOCRACY FOR AMERICA, attached to Ohlendorf Decl. as Exhibit 83.

Del. Kenneth R. Plum

Virginia has one of the largest deposits of uranium of anyplace in the country in Pittsylvania County in the southern part of the state. The location of Coles Hill Farm where the deposit is centered is in the Roanoke River watershed. There are smaller deposits of uranium in other parts of the state including the Piedmont region. . . . There is no precedent for large-scale uranium mining in the eastern part of the United States where population density and a wet climate increase the chance of radiation contaminating streams and

groundwater and exposure to humans, as the Southern Environmental Law Center pointed out. They go on to state that in the last century Virginia has been hit by at least 78 category-strength hurricanes, and in 2011 there were 37 tornadoes in the state including one within 20 miles of the proposed mining site. The earthquake in Virginia in August, 2011, of 5.18 whose effects were felt all the way to New York had its epicenter just 125 miles from the proposed site.

In addition to the National Academy study, the City of Virginia Beach which gets its drinking water from Lake Gaston downstream of the Coles Hill site funded a study finding that a catastrophic failure of a uranium waste containment structure at the site could contaminate the city's drinking water for as long as two years. . . . The threat to human health outweighs any arguments for lifting the ban. I remain opposed to lifting the ban and will be sensitive to any efforts to circumvent the ban through the regulatory process.

Delegate Kenneth R. Plum, *Uranium Mining in Virginia*, THE CONNECTION, July 10, 2012, attached to Ohlendorf Decl. as Exhibit 33.

Sen. Frank Ruff

[A] quintet of lawmakers – senators Frank Ruff of Clarksville and Don Merricks of Chatham, and delegates Tommy Wright, James Edmunds and Danny Marshall, representing communities from Lunenburg to Danville – wrote a letter to fellow legislators asking

in no uncertain terms that any attempt to lift the moratorium be delayed.

December 28, 2011

Dear Colleague,

I hope each of you had a great Christmas and are looking forward to 2012!

The National Academy of Sciences report on uranium mining has been released, following similar reports by Chmura Economics, the Danville Regional Foundation, Virginia Beach and others. . . . The reports are long and detailed. Parts are dense and complex. What they are not is boring. These reports deserve to be read, particularly the Academy's sections on the risks to public health and the environment. . . . The serious threats that the Academy outlines deserve to be thoroughly absorbed and extensively debated by the public and knowledgeable contributors before any decisions are made. . . . With respect to the reports themselves, a few observations are appropriate. All such reports are shaped around a set of guiding assumptions. In these cases, those assumptions include:

- The establishment and use by the company of internationally best practices in all areas.
- The use of best technology, whatever the cost.
- The development and establishment and financing of a credible regulatory structure.

- The assumption that there will be no consequential management failures, system or machinery failures, human error, external or unexpected events.

Assumptions are just that, of course. There is no guarantee that best practices will be utilized. There is no certainty that best technologies will be employed, particularly if they prove to be significantly more expensive or constraining. Both the Academy and Chmura make it clear there is no state or federal regulatory scheme or expertise in place remotely sufficient to monitor or regulate this industry.

An even larger concern is the inability to address adequately those events that are unknown and unknowable as to time and circumstance. History teaches that human error and/or system failures are inevitable. The unexpected happens. Design flaws show up after the fact. The Academy cannot predict what or when or how but anyone who has worked in complex industrial operations knows that things will go wrong. Mistakes occur, hurricanes and earthquakes will happen. One only has to read the newspaper to see the catastrophic consequences of the failure of operations that were designed and operated and regulated by the best and the brightest. Three Mile Island, Chernobyl, the Challenger, Fukushima, Union Carbide come quickly to mind – the question is not if these events will occur, but when and at what cost.

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I close with the quote attributed to Paul Locke, chairman of the Academy committee that produced the report. . . . "The report didn't say you can mitigate all risks. It said you can mitigate some risks".

We are being asked to push through a proposal to lift a thirty-year old ban on an industry with an abysmal environmental record that, under the most optimistic assumptions, experts conclude the most that can be expected is to reduce some of the quite serious risks to the health and welfare of the surrounding community. How on earth can a responsible person take that gamble?

Tom McLaughlin, *Holding Pattern*, S. BOSTON NEWS & RECORD & MECKLENBURG SUN, Jan. 25, 2012, attached to Ohlendorf Decl. as Exhibit 66.

Del. Ed Scott

House Bill 2330 establishes a regulatory regime that would allow uranium mining and milling to occur in the Commonwealth of Virginia. . . . Uranium mining and milling has never taken place in the United States east of the Mississippi River, and there are significant

differences in population density, rainfall, and proximity to water bodies compared to sites in Canada or Utah and Arizona where uranium is mined. Of significant concern to me in my review is the potential impact on water quality and availability for farmers in the area of the proposed mine and for thousands of residents of Virginia and North Carolina. In Virginia, impacts on water quality could extend as far as Hampton Roads.

In reviewing this bill, the proponents have recognized the complexity of uranium mining and milling and are agreeing to a regulatory structure that is extensive and expensive. Nonetheless, it is clear that the legislation is unable to create a fail-safe scenario, and that it could be amended in future years to allow mining and milling in other parts of the state. For these and other reasons, I cannot support this legislation.

Del. Ed Scott, *From the Desk of Del. Ed Scott: Water Quality Would Be Affected by Uranium Mining and Milling*, CULPEPER TIMES, attached to Ohlendorf Decl. as Exhibit 84.

Sen. William M. Stanley, Jr.

The possibility of lifting a 30-year ban on uranium mining in Virginia will be a hot topic in the 2013 General Assembly when it convenes Jan. 9, according to local lawmakers. It will be "a nuclear issue, no pun intended," Del. Danny Marshall, R-Danville, told local business leaders and government officials during the Martinsville-Henry County Chamber of Commerce's

annual Pre-legislative Breakfast on Tuesday at the Virginia Museum of Natural History. . . . Three of the four lawmakers who spoke during the breakfast oppose uranium mining. . . . Del. Don Merricks, R-Pittsylvania County, said uranium is found throughout Virginia but studies have shown that the site the company wants to mine is the only potentially viable uranium mining location in the state. "I could live with the mine" itself, Merricks said. "The problem is the stuff that's left" after mining occurs, essentially forever." "I don't think we're ready for uranium mining," added state Sen. Bill Stanley, R-Glade Hill. "The risk is too great."

Uranium Likely to be Hot Topic, THE MARTINSVILLE BULLETIN, Dec. 19, 2012, attached to Ohlendorf Decl. as Exhibit 32.

The 2012 General Assembly might not vote on lifting Virginia's uranium-mining ban after all.

During a forum Wednesday at the Capitol, two state senators talked of a scenario that would put the yes-or-no vote off for a year. . . . "I'm all for that" approach, said Sen. William M. Stanley Jr., R-Franklin County, after the forum. His district includes the site of a proposed Virginia Uranium Inc. mine in Pittsylvania County. Virginia Uranium has been "very professional," Stanley said, but he expressed serious concerns about pollution, as well as a regional stigma, that the mining might cause. Stanley, a lawyer, said he would need to see proof "beyond a reasonable doubt"

that uranium could be mined safely in Virginia before he would vote to lift the 30-year-old ban.

Rex Springston, *Could Vote on Uranium Mining Be Set Back a Year?*, RICHMOND TIMES-DISPATCH, Dec. 8, 2011, attached to Ohlendorf Decl. as Exhibit 85.

For a politician whom local Republicans have privately criticized for being too open to uranium mining, State Sen. Bill Stanley sounded pretty unequivocal in Halifax County on Wednesday.

"I believe that unless it can be shown it is absolutely 100 percent safe," the ban against uranium ban [sic] in Virginia shouldn't be lifted, Stanley said.

And what of the argument that not[illegible]ng, not even taking a stroll, is without risk? "We're talking about radioactive material," he said, "not crossing the street."

Stanley said the region's natural resources are "too precious" to jeopardize, and that he shares the sentiments of other Southside legislators, including Del. James Edmunds of Halifax and State Sen. Frank Ruff of Clarksville, in opposing the proposed extraction of about $8 billion worth of uranium from a Chatham farm.

Eva Cassada, *Stanley Raps Uranium, Road Cost Shifting*, S. BOSTON NEWS & RECORD AND MECKLENBURG SUN, July 14, 2011, attached to Ohlendorf Decl. as Exhibit 86.

A bill that would have required well testing around uranium exploration was tabled last week in the General Assembly just a week after it was introduced by state Sen. Frank Ruff Jr. of Clarksville. . . . Sen. Bill Stanley of Penhook and Del. James Edmunds of Halifax and Del. Thomas Wright of Victoria co-patroned the bill.

Stanley said water quality is a concern of everyone in Southside Virginia.

"Whenever drilling occurs there seems to be an alteration to the quality of water," he said. "Not only are we requiring a testing of that water . . . but also a disclosure of any changes in the water quality to the homeowner."

Stanley said the bill was intended to safeguard the health of Virginians from any adverse effects from exploratory drilling.

"What we're trying to do is protect the water of our people," he said. "It is one of our greatest natural resources. I would think water quality comes before profits. People come before profits."

Tim Davis, *Bill Targets Uranium Well Testing*, CHATHAM STAR TRIBUNE, Jan. 22, 2014, attached to Ohlendorf Decl. as Exhibit 87.

Del. Scott A. Surovell

Things are starting to heat up in Virginia over uranium mining. . . . In theory, I assume almost anything

can be done safely within certain assumptions and with enough money. The problem is that the assumptions are frequently wrong. Humans have frequently proven to be very capable of under-estimating risk until after the facts. . . . One key issue is the safety of storing the mining waste, waste that can get into drinking water and containing elements that have been linked to serious diseases. A critical question for me is what kind of storage is planned, whether than storage is feasible and whether it is safe. Some say the waste must be contained for one thousand years. Uranium itself is radioactive and highly toxic to human and environmental health. . . . Mining a material that could permanently destroy the Occoquan River and impair the drinking water for millions is a non-starter for me. It is unacceptable to me to subject anyone else to that kind of risk.

Scott A Surovell, *Uranium Mining: The Coming Battle in Virginia*, MOUNT VERNON GAZETTE, July 15, 2011, attached to Ohlendorf Decl. as Exhibit 88.

Should Virginia end the uranium mining moratorium?

No, because our water supply from Lake Gaston is too important to the future of Virginia Beach. A potentially compromised water supply would cripple our economy and endanger our health for decades.

Voter Guide 2013 – House of Delegates 85th District, THE VIRGINIAN-PILOT, Oct. 27, 2013, attached to Ohlendorf Decl. as Exhibit 89.

Del. Ron Villanueva

A company wants to mine uranium in south central Virginia. That would require the General Assembly lifting a state ban on the practice. What is your position on uranium mining in Virginia?

I have worked to protect our city's primary water source at Lake Gaston and will continue to oppose efforts to lift the ban on uranium mining.

Election 2011 – Guide to Virginia House & Senate Races, THE VIRGINIAN-PILOT, Nov. 7, 2011, attached to Ohlendorf Decl. as Exhibit 90.

Villanueva opposes lifting the state's ban on uranium mining because of the risk to residents' drinking water.

Davis, Villanueva for the House, THE VIRGINIAN-PILOT, Oct. 16, 2013, attached to Ohlendorf Decl. as Exhibit 91.

Del. Tommy Wright

[A] quintet of lawmakers – senators Frank Ruff of Clarksville and Don Merricks of Chatham, and delegates Tommy Wright, James Edmunds and Danny Marshall, representing communities from Lunenburg to Danville – wrote a letter to fellow legislators asking

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Tom McLaughlin, *Holding Pattern*, S. BOSTON NEWS & RECORD & MECKLENBURG SUN, Jan. 25, 2012, attached to Ohlendorf Decl. as Exhibit 66.

Legislators representing districts that encircle a uranium deposit in Southside Virginia are asking their colleagues to abandon any effort in the 2012 session to end the state's 30-year ban on mining the radioactive ore. . . . "My main concern is I'm opposed to it regardless of the reports," Wright said. "Once our water supply and our lakes are polluted, it's too late."

Southside Legislators: Keep State's Uranium Mining Ban in 2012, RICHMOND TIMES-DISPATCH, Jan. 3, 2012, attached to Ohlendorf Decl. as Exhibit 92.

AN AGREEMENT BETWEEN THE UNITED STATES NUCLEAR REGULATORY COMMISSION AND THE COMMONWEALTH OF VIRGINIA FOR THE DISCONTINUANCE OF CERTAIN COMMISSION REGULATORY AUTHORITY AND RESPONSIBILITY WITHIN THE COMMONWEALTH PURSUANT TO SECTION 274 OF THE ATOMIC ENERGY ACT OF 1954, AS AMENDED

WHEREAS, The United States Nuclear Regulatory Commission (the Commission) is authorized under Section 274 of the Atomic Energy Act of 1954, as amended, 42 U.S.C. §2011 *et seq.* (the Act), to enter into agreements with the Governor of any State/ Commonwealth providing for discontinuance of the regulatory authority of the Commission within the Commonwealth under Chapters 6, 7, and 8, and Section 161 of the Act with respect to byproduct materials as defined in Sections 11e.(1), (3), and (4) of the Act, source materials, and special nuclear materials in quantities not sufficient to form a critical mass; and,

WHEREAS, The Governor of the Commonwealth of Virginia is authorized under the Code of Virginia Section 32.1-235, to enter into this Agreement with the Commission; and,

WHEREAS, The Governor of the Commonwealth of Virginia certified on June 12, 2008, that the Commonwealth of Virginia (the Commonwealth) has a program for the control of radiation hazards adequate to protect public health and safety with respect to the materials within the Commonwealth covered by this Agreement, and that the Commonwealth desires to assume regulatory responsibility for such materials; and,

WHEREAS, The Commission found on February 27, 2009 that the program of the Commonwealth for the regulation of the materials covered by this Agreement is compatible with the Commission's program for the regulation of such materials and is adequate to protect public health and safety; and,

WHEREAS, The Commonwealth and the Commission recognize the desirability and importance of cooperation between the Commission and the Commonwealth in the formulation of standards for protection against hazards of radiation and in assuring that Commonwealth and Commission programs for protection against hazards of radiation will be coordinated and compatible; and,

WHEREAS, The Commission and the Commonwealth recognize the desirability of the reciprocal recognition of licenses, and of the granting of limited exemptions from licensing of those materials subject to this Agreement; and,

WHEREAS, This Agreement is entered into pursuant to the provisions of the Act;

NOW, THEREFORE, It is hereby agreed between the Commission and the Governor of the Commonwealth acting on behalf of the Commonwealth as follows:

ARTICLE I

Subject to the exceptions provided in Articles II, IV, and V, the Commission shall discontinue, as of the effective date of this Agreement, the regulatory authority of the Commission in the Commonwealth under Chapters 6, 7, and 8, and Section 161 of the Act with respect to the following materials:

1. Byproduct materials as defined in Section 11e.(1) of the Act;
2. Byproduct materials as defined in Section 11e.(3) of the Act;
3. Byproduct materials as defined in Section 11e.(4) of the Act;
4. Source materials; and
5. Special nuclear materials in quantities not sufficient to form a critical mass.

ARTICLE II

This Agreement does not provide for discontinuance of any authority and the Commission shall retain authority and responsibility with respect to:

1. The regulation of the construction and operation of any production or utilization facility or any uranium enrichment facility;

2. The regulation of the export from or import into the United States of byproduct, source, or special nuclear material, or of any production or utilization facility;

3. The regulation of the disposal into the ocean or sea of byproduct, source, or special nuclear materials waste as defined in the regulations or orders of the Commission;

4. The regulation of the disposal of such other byproduct, source, or special nuclear materials waste as the Commission from time to time determines by regulation or order should, because of the hazards or potential hazards thereof, not be disposed without a license from the Commission;

5. The evaluation of radiation safety information on sealed sources or devices containing byproduct, source, or special nuclear materials and the registration of the sealed sources or devices for distribution, as provided for in regulations or orders of the Commission;

6. The regulation of byproduct material as defined in Section 11e.(2) of the Act;

7. The regulation of the land disposal of byproduct, source, or special nuclear material waste received from other persons.

ARTICLE III

With the exception of those activities identified in Article 11.1 through 4, this Agreement may be amended, upon application by the Commonwealth and approval by the Commission, to include one or more of the additional activities specified in Article II, whereby the Commonwealth may then exert regulatory authority and responsibility with respect to those activities.

ARTICLE IV

Notwithstanding this Agreement, the Commission may from time to time by rule, regulation, or order, require that the manufacturer, processor, or producer of any equipment, device, commodity, or other product containing source, byproduct, or special nuclear material shall not transfer possession or control of such product except pursuant to a license or an exemption from licensing issued by the Commission.

ARTICLE V

This Agreement shall not affect the authority of the Commission under Subsection 161b or 161i of the Act to issue rules, regulations, or orders to protect the common defense and security, to protect restricted data, or to guard against the loss or diversion of special nuclear material.

ARTICLE VI

The Commission will cooperate with the Commonwealth and other Agreement States in the formulation of standards and regulatory programs of the Commonwealth and the Commission for protection against hazards of radiation and to assure that Commission and Commonwealth programs for protection against hazards of radiation will be coordinated and compatible.

The Commonwealth agrees to cooperate with the Commission and other Agreement States in the formulation of standards and regulatory programs of the Commonwealth and the Commission for protection against hazards of radiation and to assure that the Commonwealth's program will continue to be compatible with the program of the Commission for the regulation of materials covered by this Agreement.

The Commonwealth and the Commission agree to keep each other informed of proposed changes in their respective rules and regulations, and to provide each other the opportunity for early and substantive contribution to the proposed changes.

The Commonwealth and the Commission agree to keep each other informed of events, accidents, and licensee performance that may have generic implication or otherwise be of regulatory interest.

ARTICLE VII

The Commission and the Commonwealth agree that it is desirable to provide reciprocal recognition of licenses

for the materials listed in Article I licensed by the other party or by any other Agreement State.

Accordingly, the Commission and the Commonwealth agree to develop appropriate rules, regulations, and procedures by which such reciprocity will be accorded.

ARTICLE VIII

The Commission, upon its own initiative after reasonable notice and opportunity for hearing to the Commonwealth, or upon request of the Governor of the Commonwealth, may terminate or suspend all or part of this agreement and reassert the licensing and regulatory authority vested in it under the Act if the Commission finds that (1) such termination or suspension is required to protect public health and safety, or (2) the Commonwealth has not complied with one or more of the requirements of Section 274 of the Act.

The Commission may also, pursuant to Section 274j of the Act, temporarily suspend all or part of this agreement if, in the judgment of the Commission, an emergency situation exists requiring immediate action to protect public health and safety and the Commonwealth has failed to take necessary steps. The Commission shall periodically review actions taken by the Commonwealth under this Agreement to ensure compliance with Section 274 of the Act which requires a Commonwealth program to be adequate to protect public health and safety with respect to the materials covered by this Agreement and to be compatible with the Commission's program.

ARTICLE IX

This Agreement shall become effective on March 31, 2009, and shall remain in effect unless and until such time as it is terminated pursuant to Article VIII.

Done at Rockville, MD, in triplicate, this 4th day of March, 2009.

FOR THE UNITED STATES NUCLEAR REGULATORY COMMISSION

/RA/

Dale E. Klein, Chairman

Done at Richmond, Virginia, in triplicate this 18th day of March, 2009.

FOR THE COMMONWEALTH OF VIRGINIA

/RA/

Timothy M. Kaine, Governor

In the Supreme Court of the United States

No. 04-575

DIANNE R. NIELSON, EXECUTIVE DIRECTOR, UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY, ET AL., PETITIONERS

v.

PRIVATE FUEL STORAGE, L.L.C., ET AL.

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE TENTH CIRCUIT

BRIEF FOR THE UNITED STATES AS AMICUS CURIAE

This brief is submitted in response to the Court's order inviting the Solicitor General to express the views of the United States. In the view of the United States, the petition for a writ of certiorari should be denied.

STATEMENT

Following a publicly-announced proposal by respondents, a private consortium of electric utilities and an Indian tribe, to develop a storage facility for spent nuclear fuel on Indian land in the State of Utah, the

State enacted a series of comprehensive and interrelated statutes to ban or limit the storage and transportation of spent nuclear fuel. The Tenth Circuit held that respondents' challenge to those statutes was ripe for review and that most of the statutory provisions were preempted by the Atomic Energy Act of 1954 (AEA), 42 U.S.C. 2011 *et seq.* Those rulings are correct and do not warrant further review by this Court.

1. In the AEA, Congress vested the Nuclear Regulatory Commission (NRC) with "exclusive jurisdiction to license the transfer, delivery, receipt, acquisition, possession and use of nuclear materials. Upon these subjects, no role was left for the states." *Pacific Gas & Elec. Co.* v. *State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 207 (1983) (citations omitted); *Silkwood* v. *Kerr-McGee Corp.*, 464 U.S. 238, 249-250 (1984). The AEA also preempts state laws that have a purpose to address "protection against radiation hazards," 42 U.S.C. 2021(k), or that have a "direct and substantial effect on the decisions made by those who build or operate nuclear facilities concerning radiological safety levels." *English* v. *General Elec. Co.*, 496 U.S. 72, 85 (1990).

Spent nuclear fuel (SNF), which is highly radioactive, must periodically be removed from commercial nuclear reactors. *Pacific Gas*, 461 U.S. at 195-196. "While the AEA does not specifically refer to the storage or disposal of spent nuclear fuel, it has long been recognized that the AEA confers on the NRC authority to license and regulate the storage and disposal of such fuel." *Bullcreek* v. *NRC*, 359 F.3d 536, 538 (D.C. Cir.

2004). Pursuant to the AEA, the NRC has promulgated regulations providing a comprehensive procedure for the licensing of *temporary* SNF storage installations in order to ensure safe storage of the material. 10 C.F.R. Pt, 72. Congress addressed the *permanent* disposal of SNF (as well as high level radioactive waste) in the Nuclear Waste Policy Act of 1982, 42 U.S.C. 10101 *et seq.*, which provides for the study and eventual development of a permanent geologic repository. *Nuclear Energy Inst., Inc.* v. *EPA*, 373 F.3d 1251, 1258-1262 (D.C. Cir. 2004).

"As of 2003, nuclear reactors in the United States had generated approximately 49,000 metric tons of spent nuclear fuel. Most of this waste is currently stored at reactor sites across the country. * * * By the year 2035, the United States will have produced 105,000 metric tons of nuclear waste – approximately twice the current inventory." *Nuclear Energy Inst.* v. *EPA*, 373 F.3d at 1258 (citations omitted). Facilities for the storage and disposal of SNF are therefore essential to sustain the viability of nuclear power as an energy source. *Pacific Gas*, 461 U.S. at 195196 & n.2.

Since 1997, respondent Private Fuel Storage (PFS) has sought a license from the NRC to build and operate a temporary SNF storage facility on Utah land belonging to respondent the Skull Valley Band of Goshute Indians that is located southeast of Salt Lake City. Pet. App. 4a, 56a. The proposed facility would provide storage capacity for utilities that seek offsite storage of the SNF, until such time as the permanent geologic repository is operational. Expressing specific

concern about the safety of PFS's efforts, Utah passed a series of statutes between 1998 and 2001 that the courts below found were designed to block the proposed facility. *Id.* at 5a, 37a, 47a, 49a-50a, 52a, 56a-57a, 63a. They are summarized briefly below.

a. *Utah's Licensing Regulations.* Part 3 of Utah's Radiation Control Act requires a SNF storage facility that has been licensed by the NRC also to obtain a state license for construction and operation. Utah Code Ann. § 19-3-304. The licensing scheme requires extensive analysis of health and safety issues related to the storage of SNF, *Id.* §§ 19-3-301(2)-(4), 19-3-304 to 19-3-307. The applicant also must provide Utah's Department of Environmental Quality (DEQ) with extensive information related to health and safety aspects of the proposed installation. *Id.* § 19-3-305. The license may not be issued unless DEQ finds the information in the application sufficient to support a variety of specific findings related to the health and safety effects of the facility. *Id.* § 19-3-306. The applicant must satisfy DEQ, for example, that "the wastes will not cause or contribute to an increase in mortality, an increase in illness, or pose a present or potential hazard to human health or the environment." *Id.* § 19-3-306(3). The applicant must also provide information on topics such as groundwater, security plans, quality assurance programs, radiation safety programs, and emergency plans. *Id.* § 19-3-305. All of those areas are regulated by the NRC under 10 C.F.R Part 72 in order to protect human health and safety and the environment.

Part 3 also imposes substantial application and licensing fees. The applicant must pay a non-refundable "initial fee" of $5 million and thereafter "shall * * * pay an additional fee to cover the costs to the state associated with review of the application, including costs to the state and the state's contractors for permitting, technical, administrative, legal, safety, and emergency response reviews, planning, training, infrastructure, and other impact analyses, studies, and services required to evaluate a proposed facility." Utah Code Ann. § 19-3-308(1)(a) and (b). The applicant must also post a bond of "*at least*" $2 billion, or "a greater amount as determined * * * to be necessary to adequately respond to," among other things, "any reasonably foreseeable releases." *Id.* § 19-3-306(10) (emphasis added),

b. *Unfunded liability payment.* Part 3 further requires the operator of an SNF storage facility to pay to the State an amount equal to 75% of the "unfunded potential liability" of the project. Utah Code Ann. § 19-3-319(3)(a). That amount will be determined by DEQ based upon the health and economic costs expected to result from "a reasonably foreseeable accidental release" of SNF. *Id.* § 19-3-301(5)(a). Under those provisions, the DEQ may require payment of an additional amount above the level of insurance that the NRC decides to require in the project license. Pet. App. 44a-45a.

c. *Revocation of limited liability.* Part 3 also revokes statutory and common-law limited liability for

officers, directors, and equity-interest owners of companies operating SNF storage facilities in Utah. Utah Code Ann. § 19-3-318.

d. *County planning requirements and the prohibition on providing municipal services.* Utah's legislation also includes county planning requirements. Pet. App. 36a, 75a. Among other things, county governments must either ban the storage and transportation of SNF, or adopt a comprehensive land use plan containing detailed information regarding the effects of any proposed SNF site upon public health and welfare. Utah Code Ann. § 17-27-301. The plan also must include "specific measures to mitigate the effects of high-level nuclear waste and greater than Class C radioactive waste and guarantee the health and safety of the citizens of the state." *Id.* § 17-27-301(3)(a)(iii). In addition, a county "may not provide, contract to provide, or agree in any manner to provide municipal-type services * * * to any area under consideration for a storage facility or transfer facility for placement of high-level nuclear waste, or greater than Class C radioactive waste." *Id.* § 17-34-1(3).

e. *Transportation provisions.* Utah also enacted provisions related to roads and railroad crossings that may be needed for access to an SNF storage facility in Utah. Utah Code Ann. §§ 544-15, 72-3-301, 72-4-125(4), 78-34-6(5); Pet. App. 8a-9a. One of the provisions divests the county of control over the only road providing access to PFS's proposed SNF storage facility, by designating the road a state highway. Utah Code

Ann. § 72-4-125(4); Pet. App. 8a. Another provision requires that, before a disputed petition for a railroad crossing filed by an entity engaged in SNF storage may be resolved, the Governor and the state legislature must concur in the decision – a requirement that is imposed only on entities engaged in SNF storage. Utah Code Ann. § 54-415(4)(b); Pet. App. 8a.[1]

2. Respondents challenged Utah's statutes in the United States District Court for the District of Utah, arguing, *inter cilia*, that they were preempted by the AEA. In July 2002, the district court issued an order holding that respondents had standing to sue, that their claims were ripe for review, and that the relevant statutes were preempted by the AEA. Pet. App. 54a-77a.

3. The court of appeals affirmed. Pet. App. 1a-53a. The court held that respondents' preemption claims were ripe for review because the question of preemption is predominately legal and therefore fit for judicial resolution. *Id.* at 23a-24a. The court also reasoned that postponing review would impose a substantial hardship on the parties. *Id.* at 24a. On the merits, the court affirmed the district court's holding that the

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[1] Utah also passed certain provisions that require drug and alcohol testing of employees of companies engaged in SNF storage and authorize litigation to determine water rights in areas under consideration for SNF storage. The district court rejected respondents' Commerce Clause challenge to those provisions, Pet. App. 77a-80a, and that ruling was not appealed. *Id.* at 5a.

challenged statutes regulated in the area of nuclear safety and therefore were preempted. *Id.* at 25a-53a.

DISCUSSION

The court of appeals applied well-established legal principles governing ripeness and preemption to the unique circumstances of this case and concluded that Utah's statutory scheme is preempted. That decision is correct, and does not conflict with any decisions of this Court or any court of appeals. Further review is not warranted.

A. The Ripeness Question Does Not Merit Review

* * *

B. The Court Of Appeals' Application Of Field Preemption Principles To The Circumstances Of This Case Does Not Merit Review

On the merits of the preemption issue, petitioners argue that the court of appeals' decision violates the standards for facial preemption of state law, because respondents allegedly have not shown that the state laws are invalid in *all* of their applications. Pet. 13. Petitioners thus fault the courts below for not determining whether any of the laws could be validly applied to serve interests other than the regulation of radiological safety. Pet. 19-27. But this is not a case where generally applicable safety laws are preempted as applied

to a federally-preempted field, like nuclear safety regulation. Here, the lower courts found that the entirety of the series of interrelated laws at issue here were targeted specifically to regulate the safety aspects of the proposed waste facility and were designed to halt the construction and operation of the proposed facility based on radiation hazard concerns. In light of those factual determinations, the decision to find the entire statutory scheme preempted on its face is correct. Moreover, the case-specific determination of the lower courts does not merit this Court's review and is correct in any event.

1. "[S]tate law is pre-empted where," *inter alia*, "it regulates conduct in a field that Congress intended the Federal Government to occupy exclusively." *English*, 496 U.S. at 79. When Congress so intends, it is said to have preempted the "field," *ibid.*, and thus a state law addressed specifically to the pre-empted field is invalid on its face, *i.e.*, in all of its applications. "When the federal government completely occupies a given field or an identifiable portion of it, * * * the test of [field] pre-emption is whether 'the matter on which the State asserts the right to act is in any way regulated by the Federal Act.'" *Pacific Gas*, 461 U.S. at 212-213 (quoting *Rice* v. *Santa Fe Elevator Corp.*, 331 U.S. 218, 236 (1947)).

Congress has preempted the field of nuclear safety regulation. *Pacific Gas*, 461 U.S. at 212-213; *English*, 496 U.S. at 82. As the Court has explained, "[s]tate safety regulation is not preempted only when it

conflicts with federal law[;] [r]ather, the federal government has occupied the entire field of nuclear safety concerns." *Pacific Gas*, 461 U.S. at 212. Thus, the AEA preempts *any* state legislation that falls within "the field of nuclear safety concerns." *Id.* at 212-213; accord *id.* at 208 ("the safety of nuclear technology [is] the exclusive business of the federal government").

For those reasons, petitioners err in relying on *California Coastal Commission v. Granite Rock Co.*, 480 U.S. 572, 588-589 (1987), in which the Court held that a state permitting scheme was not facially preempted because it was possible that the scheme could be implemented as an exercise of permissible environmental regulation. That decision did not involve any issue of *field* preemption, and thus sheds no light on the question presented in this case. *Id.* at 589 (noting that field preemption was "concededly not the case"). Moreover, the Court emphasized that the allegedly preempting federal regulations specifically contemplated state regulation in the field of environmental protection, which is, of course, a contemplation at odds with any theory of field preemption. *Id.* at 583-589. Here, by contrast, the federal government exclusively regulates the field of nuclear safety and the "licens[ing] [of] the transfer, delivery, receipt, acquisition, possession, and use of nuclear materials." *Pacific Gas*, 461 U.S. at 207.[5]

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[5] For similar reasons, petitioners err in relying on lower court decisions that declined to find a law preempted in areas of the law other than the field of nuclear safety. Pet. 28-29. None of

2. In this case, the court of appeals carefully reviewed Utah's statutory scheme and determined that it was targeted to and regulated exclusively in the preempted field of nuclear safety. The Tenth Circuit specifically found that Utah's statutes were motivated by concerns about nuclear safety and directly addressed the field of radiation hazards. Pet. App. 37a, 47a, 49a-50a, 52a. Although petitioners argue that Utah's purpose in protecting against radiation hazards does not bring the challenged legislation within the preempted field, Pet. 22-23, there is no basis for this Court to reconsider its statement in *English* that "part of the pre-empted field is defined by reference to the purpose of the state law." *English*, 496 U.S. at 84; see 42 U.S.C. 2021(k) ("Nothing in this section shall be construed to affect the authority of any State or local agency to regulate activities for *purposes* other than protection against radiation hazards.") (emphasis added). Quite to the contrary, the Court subsequently has reaffirmed the rule in *English* that purpose is relevant and has made clear that a State cannot avoid preemption simply by "articulat[ing] a purpose other

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those decisions involved field preemption. Rather, the area asserted to be preempted contemplated the operation of state law. *Pharmaceutical Research & Mfrs. of Am.* v. *Concannon*, 249 F.3d 66 (1st Cir. 2001), aff'd, 538 U.S. 644 (2003); *Natural Res, Def. Council* v. *Houston*, 146 F.3d 1118 (9th Cir. 1998), cert. denied, 526 U.S. 1111 (1999); *Pentel* v. *City of Mendota Heights*, 13 F.3d 1261 (8th Cir. 1994); *Chemical Specialities Mfrs. Ass'n* v. *Allenby*, 958 F.2d 941 (9th Cir.), cert. denied, 506 U.S. 825 (1992); *Baltimore & Ohio R.R.* v. *Oberly*, 837 F.2d 108 (3d Cir. 1988); *Esso Standard Oil Co.* v. *Department of Consumer Affairs*, 793 F.2d 431 (1st Cir. 1986).

than (or in addition to)" the prohibited purpose. *Gade* v. *National Solid Wastes Mgmt. Ass'n*, 505 U.S. 88, 105 (1992). Thus, when a State enacts legislation based upon "nuclear safety concerns," the laws are preempted without the need to demonstrate their effect. *Pacific Gas*, 461 U.S. at 212-213.

With respect to Utah's licensing scheme, petitioners fault the court of appeals for focusing "only on certain radiological-safety measures" that pervaded Utah's licensing scheme, when the "informational" and fee requirements could conceivably serve some non-safety interests of the State. Pet. 12, 26; accord Pet. 24. Although petitioners apparently concede that "certain" of the State's licensing provisions are preempted, petitioners do not identify which provisions fall within the category of preempted legislation, and petitioners do not identify any precise *non*-safety interest of the State that would be advanced by any particular provision of the licensing scheme. Accordingly, petitioners fail to provide any basis for overturning the lower courts' finding that Utah's scheme is entirely "grounded in [radiological] safety concerns." Pet. App. 52a (quoting *Pacific Gas*, 461 U.S. at 213). Petitioners' argument, moreover, overlooks the fact that Utah's comprehensive licensing scheme *as a whole* was targeted at the preempted field of nuclear safety and attempts to regulate within the NRC's "exclusive jurisdiction to license the * * * delivery, receipt, acquisition, possession and use of nuclear materials." *Pacific Gas*, 461 U.S. at 206. Thus, unlike the state moratorium upheld in

Pacific Gas, in which the State was exercising its traditional authority over utilities to advance the economic interests of ratepayers, *id.* at 207-212, Utah's statutes exclusively target a proposed nuclear waste storage facility, *i.e.*, a facility that generates no power within the State and solely engages in the "delivery, receipt, acquisition, [and] possession * * * of nuclear materials," *id.* at 207. Because Utah's laws erect targeted discriminatory barriers aimed at blocking respondents from engaging in those activities, Utah's statutory scheme "would * * * directly conflict with the NRC's exclusive authority" to license those activities. *Id.* at 212.

The court of appeals correctly concluded that, because Utah's scheme pervasively regulated the field of nuclear safety, the challenged provisions would have "'some direct and substantial effect on the decisions' * * * regarding radiological safety levels of SNF in Utah." *Pacific Gas*, 461 U.S. at 212 (quoting *English*, 496 U.S. at 85). Indeed, even the State's "informational" requirements directly regulate in the area of protection against radiological hazards. Those provisions would require PFS to undertake extensive studies in areas unquestionably within the NRC's authority to regulate, such as the environmental and human health risk and effects of radiation hazards. *E.g.*, Utah Code Ann. § 19-3-305(1), (4), (10), (12), (14);

see also *id.* § 17-27- 301(3)(a)(i) (incorporating informational provisions into county planning requirements).[6]

Petitioners also argue that, under *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238 (1984), States may require power plants to ensure adequate funding in the event of a nuclear accident, and that the unfunded liability provisions here were improperly invalidated because the State has yet to determine what respondents' potential exposure would be or how respondents would make the required payment of 75% of its potential liability to the State. Pet. 25. *Silkwood* held that common law damages actions based on radiation accidents were not preempted because Congress specifically contemplated the availability of "existing state tort law remedies" in passing the Price Anderson Act, 42 U.S.C. 2210, and because Congress had not provided any federal remedy for persons injured by a radiation accident. *Silkwood*, 464 U.S. at 251-252. Absent those considerations, the Court suggested, the result would likely have been different. *Id.* at 250-251.

This case involves not generally-applicable, preexisting common law remedies expressly preserved by

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[6] Although some of the other informational provisions in Section 19-3-305 may have a non-safety rationale or serve non-safety interests, the State, as discussed, did not pass those provisions in isolation but as part of a comprehensive scheme that was targeted at preventing the facility from operating based primarily on safety concerns. We do not read the court of appeals' decision as preventing Utah from reenacting narrowly tailored statutes that do not seek to address radiological hazards and do not otherwise undermine the NRC's efforts to regulate nuclear facilities.

federal law, but an extraordinary regulatory bonding requirement that addresses an issue – the financial ability of a storage facility to compensate in the event of damages actions – expressly addressed by the federal scheme. As the court of appeals explained, "[u]nder the federal licensing scheme * * * it is not the states but rather the NRC that is vested with the authority to decide under what conditions to license an SNF storage facility." Pet. App. 45a. Indeed, the NRC in this case has already determined that PFS's $200 million nuclear energy liability policy, which was "the largest one currently available," is sufficient under NRC financial protection requirements. *Id.* at 43a. In addition, the NRC "at this juncture . . . has decided *not* to invoke its discretionary authority" to apply the Price-Anderson Act to SNF storage facilities. *Ibid.*; see 42 U.S.C. 2210(a). The State was not free to impose additional requirements based on its view of the safety risks associated with operation of the facility.

Utah's abolition of traditional limited liability for corporate shareholders suffers similar flaws. Pet. 24-26. The court of appeals explained that state law "removes [the] well established protection" of limited liability and "does so for reasons that the Utah officials concede are related to radiological safety concerns." Pet. App. 47a. Unlike the "existing state tort law remedies" at issue in *Silkwood* (464 U.S. at 252) and in *English*, which applied in a *neutral* manner to all private employers, the State in this case has created a discriminatory rule of liability targeted solely at the nuclear waste industry based on its perceived threat of

radiological hazards. Utah Code Ann. § 19-3-318(2)(b) ("An organization engaging in [nuclear waste] activities has significant potential to affect the health, welfare, or best interests of the state and should not have limited liability for its equity interest holders."). Thus, "the abolition of limited liability attempts a sea change in the law of corporations and is targeted at the nuclear industry only. The statutes do not involve a state tort remedy that existed prior to the enactment of federal legislation regarding nuclear power and that Congress intended to preserve." Pet. App. 47a.

The court of appeals also properly invalidated Utah's attempt to ban counties from providing PFS any municipal services, including "fire protection, garbage disposal, water, electricity, and law enforcement." Pet. App. 36a. Those sweeping provisions are designed to "address matters of radiological safety that are addressed by federal law and that are the exclusive province of the federal government." *Id.* at 37a. Although petitioners correctly observe that the AEA does not require counties to provide municipal services to nuclear waste facilities, Pet. 24-25, the State's "pervasive ban on providing municipal services here * * * targets only those engaged in SNF transportation and storage and does so for safety reasons." Pet. App. 38a The court thus properly concluded that both the "purpose and effect of the state law" was to "use [the State's] authority to regulate law enforcement and other similar matters as a means of regulating radiological hazards." *Id.* at 40a-41a. The same is true of the county siting provisions, which force counties to adopt "specific measures * * *

to guarantee the health and safety of the citizens of the state" against the threats posed by nuclear waste. Utah Code Ann. § 17-27-301(3)(a)(iii).[7]

Petitioners also argue that the State's transportation provisions merely reallocate control over transportation to the facility away from the county and to the Governor and state Legislature. Petitioners accordingly argue that the State should be permitted to apply the provisions before determining that they conflict with federal law. Pet. 26. That contention lacks merit. Petitioners do not dispute that the purpose of the transportation provisions is "to prevent the transportation and storage of SNF in Utah" based on the State's concerns regarding nuclear safety. Pet. App. 49a (citing district court opinion, *id.* at 74a n.10). The evidence included the statement of the state legislator who sponsored the road provisions, explaining that they established a "moat" around the proposed SNF site. *Id.* at 49a. Moreover, the legislative history of the road and railroad crossing provisions confirms that they were based on health and safety concerns. *Id.* at 49a-50a, 74a n.10. The court of appeals also concluded that "by jeopardizing access to the proposed SNF storage facility, the Road Provisions directly and substantially affect decisions regarding radiological safety levels by

[7] Petitioners' attempt to defend the ban on municipal services also does not warrant this Court's review because petitioners represent that those provisions will be rendered inapplicable if the NRC approves a license for PFS. Pet. 6. Thus, petitioners have no interest in having the Court grant plenary review of the Tenth Circuit's invalidation of that provision because it will, by petitioners' own admission, never be implemented by the State.

those operating nuclear facilities," *id.* at 50a, and were preempted for that reason as well. See *id.* at 74a ("This metaphorical 'moat' more likely than not would prevent the construction of PFS's proposed SNF facility. * * * Governor Leavitt has made clear that he will not allow SNF into Utah if possible.").

3. Petitioners also argue that the court of appeals' decision conflicts with *Kerr-McGee Chemical Corp.* v. *City of West Chicago*, 914 F.2d 820 (7th Cir. 1990), which held a state law not preempted when it was not clear that the state law would frustrate NRC's licensing regime. That decision, however, concerned a local erosion control and sedimentation ordinance that, quite unlike the state laws here, was completely "radiation neutral." *Id.* at 827. Here, by contrast, Utah's legislation targets a specific proposed nuclear waste facility with a comprehensive set of restrictive requirements that are aimed at preventing its construction and operation based upon nuclear safety concerns. Utah's legislation is simply not "radiation neutral." *Ibid.*

Petitioners also claim that the court of appeals' decision conflicts with *Citizens for an Orderly Energy Policy, Inc.* v. *County of Suffolk*, 813 F.2d 570 (2d Cir. 1987), which involved a county resolution declining to participate in radiological emergency response planning. The Second Circuit's decision, however, did not even independently discuss the issue of preemption, but merely affirmed the district court's resolution of the issue for "substantially for the reasons set forth in the district court's opinion." *Id.* at 571. In any event, the decision

is readily distinguishable. The district court explained that Congress in passing the AEA "was well aware of the possibility that local governments might refuse" to engage in emergency planning. *Citizens for an Orderly Energy Policy, Inc.* v. *County of Suffolk*, 604 F. Supp. 1084, 1095 (E.D.N.Y. 1985). Here, no such Congressional intent supports the sweeping series of statutes passed by the State to regulate in the area of nuclear safety.

Petitioners' claim that the decision below conflicts with the NRC's views in *Long Island Lighting* Co., 21 N.R.C. 644 (1985), fails for similar reasons. In that decision, the NRC's Atomic Safety and Licensing Board found that state laws prohibiting *the plant itself* from exercising traditional police powers in the event of a nuclear emergency (*e.g.*, by guiding off-site traffic or by directing the public) were not preempted. The NRC found that the state laws, which were neutral and not directed at the nuclear industry, "were enacted * * * for purposes totally unrelated to nuclear safety concerns." *Id.* at 904; *ibid.* ("The apparent purposes * * * have no nexus with regulation of radiological health and safety. They are simply laws regulating local matters such as flow of traffic on public roads."). By contrast, Utah's comprehensive and targeted legislation is directly related to the State's concern about radiological safety levels at the proposed SNF storage facility and would have a direct and substantial effect on the federal health and safety regulatory scheme that protects against radiological hazards. The court of appeals thus

correctly concluded that Utah's unique statutory scheme, viewed as a whole, is preempted.

CONCLUSION

The petition for a writ of certiorari should be denied.

Respectfully submitted.

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RECORD AND BRIEFS

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No. _____

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In The
Supreme Court of the United States

VIRGINIA URANIUM, INC., *et al.*,

Petitioners,

v.

JOHN WARREN, *et al.*,

Respondents.

On Petition For Writ Of Certiorari To The United States Court Of Appeals For The Fourth Circuit

PETITION FOR WRIT OF CERTIORARI

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April 21, 2017

In the Supreme Court of the United States

No. 07-1059

UNITED STATES OF AMERICA, PETITIONER

v.

EURODIF, S.A., ET AL.

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

PETITION FOR A WRIT OF CERTIORARI

The Solicitor General, on behalf of the United States of America, respectfully petitions for a writ of certiorari to review the judgment of the United States Court of Appeals for the Federal Circuit in this case.

* * *

STATEMENT

1. The antidumping-duty statute provides a remedy to domestic manufacturing industries harmed by unfair foreign competition, by imposing special duties when "foreign merchandise is being, or is likely to be, sold in the United States at less than its fair value." 19 U.S.C. 1673(1). Antidumping duties are "the amount by which the normal value [*i.e.*, the price when sold 'for consumption in the exporting country'] exceeds the

export price [*i.e.*, the price when sold 'to an unaffiliated purchaser in the United States']" for the merchandise. 19 U.S.C. 1673, 1677a(a), 1677b(a)(1)(B)(i). That difference is known as the "dumping margin." 19 U.S.C. 1677(35)(A).

The imposition of antidumping duties requires two independent determinations. First, the Department of Commerce (Commerce) must determine that the subject merchandise was sold in the United States for less than fair value, or "dumped," during a period of investigation. 19 U.S.C. 1673(1); see 19 U.S.C. 1677(1). Second, the International Trade Commission (ITC) must determine that the domestic industry was materially injured or threatened with material injury by virtue of dumped imports. 19 U.S.C. 1673(2); see 19 U.S.C. 1677(2). If both final determinations are affirmative, Commerce issues an antidumping-duty order directing United States Customs and Border Protection (Customs) to assess duties in an amount equal to the dumping margin for the goods. 19 U.S.C. 1673d(c)(2), 1673e(a)(1).

An interested party may challenge final antidumping-duty determinations before the Court of International Trade (CIT) pursuant to 19 U.S.C. 1516a(a)(2) and 28 U.S.C. 1581(c). Commerce's determinations must be sustained unless "unsupported by substantial evidence on the [administrative] record, or otherwise not in accordance with law." 19 U.S.C. 1516a(b)(1)(B)(i).

2. In 2001, the Department of Commerce initiated an investigation into imports of low-enriched uranium (LEU) from France, as well as from a number of other European countries, based on information that foreign enrichers of uranium were selling LEU at less than fair value and thereby injuring a domestic industry. *Low Enriched Uranium From France, Germany, the Netherlands, and the United Kingdom*, 66 Fed. Reg. 1080 (2001) (notice of initiation of antidumping investigation).

a. LEU is a critical component for the domestic production of nuclear power. It is typically produced by enriching natural uranium, which contains, by weight, approximately 0.711% of the fissionable isotope U^{235}, through a process of isotope separation that increases the concentration of U^{235} to a desired level. Most nuclear utilities require fuel with a U^{235} concentration of between 3% and 5%. Once natural uranium is enriched to create LEU, the finished product is used to produce fuel rods, which are in turn used in nuclear reactors to generate electricity. App., *infra*, 181a-182a; 230a-231a.

Utilities in the United States generally acquire LEU in one of two ways: (1) by paying cash to an enricher for a quantity of LEU at a given U^{235} concentration; or (2) by delivering a quantity of unenriched uranium (known as "feedstock") to an enricher, and paying the enricher for "separative work units" (SWUs), in exchange for a quantity of LEU at a given U^{235} concentration, or "assay." App., *infra*, 182a-184a. SWUs are a "measurement of the amount of energy or

effort required to separate [*i.e.*, increase the concentration of] a given quantity of feed uranium into LEU" at a specified concentration of U^{235}. *Id.* at 183a.

b. Upon commencing its investigation into LEU imports from France, Commerce invited interested parties to comment on the investigation's scope. 66 Fed. Reg. at 1080. Although no party disputed that LEU acquired pursuant to purely cash transactions was potentially subject to antidumping duties, respondent Ad Hoc Utilities Group, a group of U.S. utilities that purchase and consume both imported and domestic LEU, submitted comments contending that imported LEU acquired pursuant to SWU transactions should be excluded from Commerce's antidumping investigation because SWU contracts "constitute the provision of services, not the production or sale of goods subject to the antidumping law." *Low Enriched Uranium from France*, 66 Fed. Reg. 36,744 (2001) (notice of preliminary determination of sales at less than fair value and postponement of final determination). Commerce preliminarily determined that, because "there is little substantive commercial difference" between cash-for-LEU contracts and SWU contracts, LEU acquired pursuant to both types of contracts fell within the scope of its antidumping investigation, but invited further comments on the issue. *Id.* at 36,745-36,746.

In December 2001, Commerce issued its final determination that LEU from France was being sold, or likely to be sold, in the United States at less than fair value. App., *infra*, 220a-262a. Commerce also concluded that all LEU from France is subject to the

antidumping law, "regardless of whether the sale is structured as one of enrichment processing or LEU." *Id.* at 231a. Commerce found that "the enrichment of uranium accounts for approximately 60 percent of the value of the LEU entering the United States," and that "enrichment processing adds substantial value to the natural uranium and creates a new and different article of commerce." *Id.* at 238a-239a. As Commerce explained, "it is the enricher who creates the essential character of the LEU. The enrichment process is not merely a finishing or completion operation, but is instead the most significant manufacturing operation involved in the production of LEU." *Id.* at 251a. Thus, "the enrichment process establishes the essential features of the LEU, creating a clearly distinct product from uranium feedstock." *Ibid.* Finding that "the enrichment process is a major manufacturing operation for the production of LEU" that results in "substantial transformation of the uranium feedstock," Commerce concluded that "the LEU enriched in and exported from Germany, the Netherlands, the United Kingdom and France is a product of those respective countries" subject to the antidumping law. *Id.* at 229a-230a.

Commerce considered and rejected the notion that a utility that acquires LEU pursuant to an SWU contract pays merely for enrichment "services" rather than for the purchase of merchandise. As Commerce explained,

> the unfair trade laws must be applicable to merchandise produced through contract manufacturing, just as they are applicable to

> merchandise manufactured by a single entity. To do otherwise would contravene the intent of Congress by undermining the effectiveness of the [antidumping-duty and other] laws, which are designed to address practices of unfair trade in goods, as well as have profound implications for the international trading system as a whole. To the extent that contract manufacturing can be used to convert trade in goods into trade in so-called "manufacturing services," the fundamental distinctions between goods and services would be eliminated, thereby exposing industries to injury by unfair trade practices without the remedy of the [trade] laws.

App., *infra*, 239a.

Commerce determined that, "no matter what the purchaser chooses to call the transaction, and no matter what terms may be common in the industry, nothing can change the fundamental facts associated with all of these transactions." App., *infra*, 240a. When a "purchaser has contracted out for a major production process that adds significant value to the input and that results in the substantial transformation of the input product into an entirely different manufactured product," Commerce "simply do[es] not consider [such] a major manufacturing process to be a 'service' in the same sense that activities such as accounting, banking, insurance, transportation and legal counsel are considered by the international trading community to be services." *Ibid.* Rather, Commerce has "always considered the output from manufacturing operations that result

in subject merchandise being introduced into the commerce of the United States to be a good." *Ibid.*

Commerce also found "that the overall arrangement, even under the SWU contracts, is an arrangement for the purchase and sale of LEU." App., *infra*, 250a-251a. The clear nature and purpose of the SWU contracts was for "an exact amount of LEU to be delivered [by the enricher to the utility] over the life of the contract." *Id.* at 253a. "And it is this bottom line (*i.e.*, a precise amount of LEU delivered over the life of the contract) that forms the fundamental nature of the agreement between buyer and seller in a SWU contract." *Ibid.*

Morever, nothing in the SWU contracts required or envisioned that the uranium feedstock provided by the utility would itself necessarily be used to produce the LEU delivered to the utility. To the contrary, "enrichers not only have complete control over the enrichment process, but in fact control the level of usage of the natural uranium provided by the utility company." App., *infra*, 252a. Indeed, "an enricher, in fulfillment of a SWU contract, may actually use more or less natural uranium and more or less SWU than is provided for in the contract (and by the utility customer). The enricher has complete control over these important production decisions." *Id.* at 253a.

Accordingly, Commerce concluded that "the contracts designated as SWU contracts are functionally equivalent to those designated as EUP transactions [*i.e.*, traditional contracts for the sale of LEU]," and

that "the overall arrangement under both types of contracts is, in effect, an arrangement for the purchase and sale of LEU." App., *infra*, 254a, 255a. "First, both types of transactions have one fundamental objective – the delivery of LEU at a specific time and location, with a specific product assay, as agreed upon in the contract." *Id.* at 255a. Second, under both types of transactions, "utility customers are not concerned with how LEU is produced or the amount of work expended (SWU) to produce such LEU. Instead, utility customers are interested in obtaining a specific quantity of a standardized product at a specified product assay." *Ibid.* "Further, under both types of contracts, because the LEU is produced at an operating tails assay determined by the enricher, the enricher ultimately determines how much uranium feed is used, the amount of SWU actually applied," and so forth. *Id.* at 256a. Finally, "for both types of contracts ownership of the LEU is only transferred to the utility customer upon delivery of the LEU. Consistent with this provision, for both types of transactions, the enricher incurs the risk of loss with respect to the LEU." *Ibid.*

Commerce rejected respondents' arguments that a regulatory subsection concerning the treatment of subcontractors engaged in so-called "tolling" operations precluded application of the antidumping-duty statute to imported LEU obtained through SWU transactions. See 19 C.F.R. 351.401(h) (providing that Commerce will "not consider a toller or subcontractor to be a manufacturer or producer where the toller or subcontractor does not acquire ownership, and does not control the

relevant sale, of the subject merchandise"). Commerce explained that the tolling provision is not "relevant or applicable in determining whether merchandise entering the United States is subject to" the antidumping law. App. *infra*, 235a. Rather, the tolling provision is part of a regulation that "was intended to 'establish certain general rules that apply to the calculation of export price, constructed export price and normal value,' and not for purposes of determining whether the [antidumping or other trade] laws are applicable" in the first instance. *Ibid.* (quoting 19 C.F.R. 351.401(a) (2000)). Commerce acknowledged that it had previously applied the tolling provision to classify a subsequent sale of the merchandise by a tollee or contractor (*i.e.*, the entity obtaining the tolled merchandise from the toller or subcontractor), rather than the sale made by the toller or subcontractor, as the relevant sale for purposes of calculating the dumping margin, but Commerce concluded that it had "never applied, nor relied upon, section 351.401(h) to exempt merchandise from [antidumping] proceedings." *Ibid.*

c. In February 2002, the ITC determined that an industry in the United States was materially injured by imports of LEU from France at less than fair value. Specifically, the ITC found that such imports had a significant negative impact on respondents USEC Inc., and its subsidiary, United States Enrichment Corporation (collectively USEC), the only domestic enricher of uranium. See United States Int'l Trade Comm'n, *Pub. No. 3486, Low Enriched Uranium from France, Germany, the Netherlands, and the United Kingdom*

(Feb. 2002) <http://hotdocs.usitc.gov/docs/pubs/701_731/pub3486.pdf> (determination and views of the Commission).

Shortly thereafter, Commerce issued an order directing Customs to assess antidumping duties on LEU from France. *Low Enriched Uranium from France*, 67 Fed. Reg. 6680 (2002) (notice of amended final determination of sales at less than fair value and antidumping duty order).

3. Respondent Eurodif S.A., a French enricher of uranium, challenged Commerce's final determination, along with its owner, respondent Compagnie General des Matieres Nucleaires (COGEMA), and COGEMA's U.S. subsidiary, respondent COGEMA, Inc. The CIT remanded to Commerce for further explanation, focusing in particular on Commerce's determination that its tolling regulation does not apply to SWU transactions. App., *infra*, 178a-219a. Although the CIT acknowledged that the tolling regulation does not "exempt merchandise from [antidumping] proceedings," the court concluded that the regulation is nevertheless relevant because "a determination that the enricher provides a tolling service would mean that the price charged by the enricher to the utility for the enrichment cannot form the basis of the export price for the purpose of determining dumping margins." *Id.* at 206a. The court determined that the circumstances of this case resembled previous cases in which Commerce had examined tolling arrangements in which a tollee had provided raw materials to a toller, which in turn produced and delivered a finished product to the tollee. *Id.* at 197a.

Noting that Commerce had determined in those cases that the tolling transaction is not a "relevant sale" for purposes of calculating the dumping margin, *id.* at 190a-192a & n.9, the CIT ruled that Commerce's decision not to apply the tolling regulation in this case "require[d] a more persuasive explanation than provided in the agency's determinations." *Id.* at 207a.

In its determination on remand, App., *infra*, 69a-177a, Commerce provided further explanation of its determination that the tolling regulation does not apply to SWU transactions. Based on the "totality of the circumstances," Commerce concluded that the tolling regulation did not apply for several reasons, including that "the enrichers make the only relevant sales that can be used for purposes of establishing U.S. price and normal value." *Id.* at 126a. Commerce found that the SWU transactions were "relevant sales" because, among other things, "these sales represent the transfer of ownership in the complete LEU product for consideration." *Id.* at 131a.

Specifically, "[b]ased upon the contracts and other evidence of record," App., *infra*, 131a, Commerce found that "[t]he enrichers transfer ownership of, and title to, the LEU to the utilities upon delivery of the merchandise for consideration." *Ibid.* By contrast, "utility customers hold title to the natural uranium feedstock that they provide to the enrichers," and "[t]he contracts state that the enrichers transfer title to the LEU to the utilities upon production *and* delivery of the LEU." *Id.* at 132a. Thus, it is only at the time of delivery that "title to the LEU is transferred to the customer, and [the

customer's] title to the feed material is extinguished." *Ibid.* Moreover, Commerce explained, because the enricher treats the natural uranium feedstock as fungible, prior to delivery of the LEU "[t]he customer does not hold title to the LEU, nor does she hold title to the feed material contained within the recently produced LEU." *Id.* at 133a. As Commerce found, "LEU produced by the enricher cannot be identified as having been derived from the feedstock provided by any particular customer." *Ibid.*

Indeed, "LEU delivered to a utility customer by an enricher under an enrichment contract may be produced *before* any natural uranium supplied by that customer could have been part of the production process for that LEU." App., *infra*, 133a (emphasis added). Accordingly, Commerce found that the operation of the SWU contract scheme "mak[es] it impossible to conclude that the LEU produced and delivered by the enricher is in any way derived from the uranium supplied by the customer." *Ibid.*

Based on those findings, Commerce concluded that, "between the time in which the LEU is produced and the time in which it is delivered as specified under the contract, the enricher holds title and holds ownership in the complete LEU product." App., *infra*, 133a. Commerce further found "that enrichers make a * * * sale when they transfer ownership of the complete LEU to the utilities through the delivery of such merchandise for consideration." *Id.* at 134a (citing *NSK Ltd.* v. *United States*, 115 F.3d 965, 973 (Fed. Cir. 1997)); see *NSK Ltd.*, 115 F.3d at 975.

4. The CIT reversed. App., *infra*, 36a-68a. The court rejected Commerce's conclusion that enrichers obtain ownership of LEU enriched under SWU contracts, finding that "although the enrichers obtain the right to use and possess the feedstock, and assume the risk of loss or damage, there is no evidence that they ever obtain ownership of either the feed uranium or the final enriched product." *Id.* at 44a. The court determined that the transfer of LEU from the enricher to the utility therefore cannot constitute a "sale," *id.* at 45a (citing *NSK Ltd.*, 115 F.3d at 975), and that Commerce's contrary determination was neither supported by substantial evidence nor in accordance with law, *id.* at 46a. The court certified the question for interlocutory appeal under 28 U.S.C. 1292(d). Slip op. No. 03-170 (Dec. 22, 2003).[1]

5. a. The court of appeals affirmed the CIT. App., *infra*, 8a-28a. The court concluded that SWU contracts are contracts for the provision of services, not for the sale of goods, and that LEU that enters the United States pursuant to SWU contracts therefore is not "merchandise * * * sold" within the meaning of 19 U.S.C. 1673(1). App. *infra*, 17-24a. The court agreed with the CIT's conclusion that "the SWU contracts in this case do not evidence any intention by the parties to vest the enrichers with ownership rights in the

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[1] The CIT also rejected Commerce's determination that the tolling provision is altogether inapplicable in this case. App., *infra*, 50a-56a. The CIT held, however, that Commerce acted reasonably in declining to apply the tolling provision in determining the members of the affected domestic industry. *Id.* at 56a-59a.

delivered unenriched uranium or the finished LEU," and also its conclusion that the SWU transactions therefore cannot be said to constitute "sales" of merchandise for purposes of the antidumping statute. *Id.* at 20a.

The court of appeals found further support for its conclusion in its earlier decision in *Florida Power & Light Co.* v. *United States*, 307 F.3d 1364 (Fed. Cir. 2002), in which it had held that, although SWU contracts do not clearly constitute either contracts for services or for goods as they do "not fall neatly" into either category, they are "best characterized" as a service contract for purposes of the Contract Disputes Act of 1978, 41 U.S.C. 601 *et seq.* App., *infra*, 20a-24a; see *Florida Power & Light Co.*, 307 F.3d at 1373.[2]

b. While the government's petition for rehearing was pending, this Court issued its decision in *National Cable & Telecommunications Ass'n* v. *Brand X Internet Services*, 545 U.S. 967 (2005), which held that "[a] court's prior judicial construction of a statute trumps an agency construction otherwise entitled to * * * deference only if the prior court decision holds that its construction follows from the unambiguous terms of the statute and thus leaves no room for agency discretion." *Id.* at 982. The government brought the decision to the Court's attention, pointing out that the court of appeals' reliance on *Florida Power & Light Co.* was inconsistent with the principles of agency deference that

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[2] The court of appeals did not consider the applicability of the tolling provision. App., *infra*, 9a, 27a.

the Court reaffirmed in *Brand X*. In an order denying rehearing, App., *infra*, 29a-35a, the court rejected that argument, stating that it had not considered itself "bound" by *Florida Power*, but had treated it only as "'persuasive' authority" for the proposition that SWU contracts are contracts for services, not goods. *Id.* at 32a. The court further held that Commerce's construction of 19 U.S.C. 1673 did not, in any event, warrant deference under *Chevron U.S.A. Inc.* v. *NRDC*, 467 U.S. 837 (1984), because "the antidumping duty statute unambiguously applies to the sale of goods and not services." App., *infra*, 33a.

Notwithstanding its previous acknowledgment that SWU contracts do "not fall neatly" into either the goods or services category, *Florida Power & Light Co.*, 307 F.3d at 1373, the court of appeals also found that "it is clear that [the SWU] contracts are contracts for services and not goods." App., *infra*, 33a. The court based that conclusion on "the critical importance" of what it characterized as "the indisputable fact that, pursuant to the contracts at issue in this case, enrichers never obtain ownership of either the feed (unenriched) uranium during enrichment or the final low enriched uranium ('LEU') product." *Ibid.* In the court's view, "the inescapable conclusion flowing from this circumstance is that the enrichers do not 'sell' LEU to utilities pursuant to the SWU contracts at issue in this case." *Id.* at 33a-34a.

6. On remand, the CIT determined that the court of appeals' decision required Commerce to rewrite the scope of its antidumping order with respect to future

LEU entries, as well as to exclude past LEU entries covered by SWU contracts from its duty calculations. 431 F. Supp. 2d 1351, 1354-1355 (2006); 442 F. Supp. 2d 1367 (2006). The government appealed the CIT's conclusion with respect to future entries of LEU. The court of appeals dismissed that appeal as non-justiciable. App., *infra*, 1a-7a.

REASONS FOR GRANTING THE PETITION

The Federal Circuit has incorrectly overridden the views of the expert agency responsible for administering and interpreting the antidumping-duty statute. By failing to defer to Commerce's reasonable statutory interpretation, the court has opened a potentially gaping loophole in the Nation's trade laws that will encourage domestic buyers and foreign producers to structure their transactions as contracts for "services" in which title to the finished merchandise is not formally vested in foreign producers before passing to the domestic buyer. The Federal Circuit erred in fashioning an irrational exception to the coverage of the antidumping-duty law that permits industries to evade antidumping duties based on the form, rather than the substance, of their transactions. The court's construction of the statute is not compelled by its text and serves only to undermine the statutory scheme that Congress designed to protect domestic industry from unfair foreign competition.

The importance of the decision below extends far beyond the economic realm. By narrowing the effective

reach of the antidumping law, the court's decision jeopardizes the full implementation of an agreement between the United States and the Russian Federation, under which Russia has undertaken to supply the United States with LEU produced by diluting highly enriched uranium from nuclear weapons. The successful implementation of that agreement, which is a key element of this Nation's nuclear nonproliferation policy, depends on Commerce's ability to apply the antidumping-duty laws to restrict imports of less-expensive LEU produced through commercial enrichment processes in Russia.

The decision below also endangers the financial viability of the only domestic uranium enricher, USEC, which is the sole source of supply for certain types of nuclear fuel used for military purposes. USEC's continued survival is important to ensure the reliability of the Nation's nuclear arsenal and the availability of fuel for nuclear-power military vessels, as well as to ensure national energy security. This Court's review is therefore warranted.

* * *

III. THE DECISION BELOW THREATENS U.S. FOREIGN POLICY AND NATIONAL SECURITY INTERESTS

The consequences of the decision below go far beyond the substantial adverse effect on the effective administration of the trade laws. The decision below, in a truly unprecedented manner for a trade case, threatens to undermine U.S. foreign policy and national

security interests in the remarkably sensitive context of nuclear fuel, nonproliferation, and ensuring domestic supplies for nuclear weaponry. Because enriched uranium is essential to nuclear power, the government's ability to regulate its entry into the United States is a matter of great significance. The court's decision in this case puts at risk full implementation of an international nuclear nonproliferation agreement and the continued survival of the only domestic source of nuclear materials for military uses. Those consequences further justify this Court's intervention.[4]

1. First, the decision below threatens to undermine the United States' Highly Enriched Uranium (HEU) Agreement with the Russian Federation, a key element of U.S. nuclear nonproliferation policy, which is dependent on the proper application of antidumping law to imported LEU.

Under the HEU Agreement, signed in 1993, the Russian Federation has undertaken by 2013 to convert 500 metric tons of weapons-grade HEU – enough for approximately 20,000 Russian nuclear warheads – into LEU for use in generating electricity in the United States. In return, the United States has agreed to

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[4] The government notes that bills are currently pending in committees in Congress that would explicitly provide that "any contract or transaction for the production of low-enriched uranium" qualifies as "a sale of foreign merchandise" under the antidumping-duty statute, 19 U.S.C. 1673. See H.R. 4929, 110th Cong., 1st Sess. (2007); S. 2531, 110th Cong., 1st Sess. (2007). There is no guarantee, however, that the legislation will be enacted, much less that it will be enacted in its present form.

purchase LEU downblended from 30 metric tons of weapons-grade HEU each year through 2013. See Agreement Concerning the Disposition of Highly Enriched Uranium Extracted from Nuclear Weapons, U.S.-Russ., Feb. 18, 1993, State Dep't No. 93-59, 1993 WL 152921. USEC, the sole domestic enricher of LEU, serves as the U.S. Executive Agent under the agreement. In that capacity, USEC purchases the downblended LEU, resells the material to U.S. utilities, and uses the proceeds to pay the Russian Government.

The foundation for the HEU Agreement was laid in 1992, when Commerce agreed to suspend an antidumping investigation into Russian uranium that had been prompted by a surge of low-price Russian uranium imports into the United States. See *Uranium from Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Ukraine, and Uzbekistan*, 57 Fed. Reg. 49,235 (1992) (notice of suspension of investigations and amendment of preliminary determinations). The antidumping suspension agreement restricts imports of Russian LEU produced through commercial enrichment processes, but exempts from those restrictions "any or all" HEU, and LEU produced through a process of downblending HEU "resulting from the dismantlement of nuclear weapons." *Id.* at 49,237.[5] The suspension agreement,

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[5] The Governments of the United States and Russia signed an amendment to the suspension agreement on uranium from Russia on February 1, 2008. See *Amendment to the Agreement Suspending the Antidumping Investigation on Uranium from the Russian Federation*, 73 Fed. Reg. 7705 (2008). The amendment adjusts the limits on Russian exports of commercial LEU to the United States. *Id.* at 7706.

which was negotiated in parallel with the HEU Agreement, thus provides an important incentive for the Russian Federation to produce LEU for export through a process of downblending, rather than through the less costly (and hence more profitable) method of enriching natural uranium through commercial processes.

The court of appeals' decision critically undermines the effectiveness of the antidumping suspension agreement as it affects enriched (as opposed to downblended) LEU, and thereby threatens the effectiveness of the HEU Agreement as well. Suspension agreements apply only to merchandise subject to the antidumping-duty law. See 19 U.S.C. 1673c(*l*) (limiting scope of suspension agreements with nonmarket economy countries to "merchandise under [antidumping] investigation"); see also 19 U.S.C. 1673c(c) (generally limiting scope of suspension agreements to "subject merchandise"); 19 U.S.C. 1677(25) (defining "subject merchandise" as, *inter alia*, "the class or kind of merchandise that is within the scope of an [antidumping] investigation). If LEU purchased pursuant to SWU contracts is not subject to the antidumping-duty law, as the Federal Circuit has held, Russia will have a strong economic incentive to avoid application of the antidumping suspension agreement by structuring transactions as the French enrichers and utilities did in this case.

If such an effort is successful, Russia would have far less incentive to continue to produce LEU via the relatively more expensive process of dismantling

nuclear warheads, rather than producing LEU by commercial enrichment. See Memorandum from Joseph A. Spetrini, Deputy Assistant Secretary for Policy and Negotiations, to David M. Spooner, Assistant Secretary for Import Administration, Issues and Decision Memorandum for the Sunset Review of the Agreement Suspending the Antidumping Investigation on Uranium from the Russian Federation 6 (June 6, 2006) <ia.ita.doc.gov/frn/summary/RUSSIA/E6-8758-1.pdf> (Sunset Review Memorandum); *Final Results of Five-Year Sunset Review of Suspended Antidumping Duty Investigation on Uranium from the Russian Federation*, 71 Fed. Reg. 32,517 (2006). Russia is the largest enricher of uranium in the world, and enriching natural uranium for commercial LEU sales is the most economically viable use of its vast enrichment capacity. Sunset Review Memorandum 6. Today Russia has substantially more enrichment capacity than necessary to supply its own domestic market, and other markets – notably in the European Union and Asia – have imposed restrictions on imports of Russian uranium products. *Ibid.* Absent full implementation of the antidumping suspension agreement, Russia would have a strong financial incentive to direct its enrichment capacity toward commercial enrichment of natural uranium for the U.S. market, rather than down-blending weapons-grade uranium, for the same market at higher cost. *Ibid.* It might terminate the HEU Agreement after one year's notice, as permitted under the Agreement, or it might halt or slow its performance under the Agreement, to the detriment of U.S. foreign policy and national security interests.

Even if Russia continued full performance under the HEU Agreement, the Agreement might still be threatened by a failure fully to implement the antidumping suspension agreement. Competition from commercially enriched Russian LEU would threaten USEC's ability to resell some or all of the downblended LEU that it is committed to purchase in its capacity as the U.S. Executive Agent under the HEU Agreement, which would, in turn, threaten USEC's ability to continue to raise the revenue necessary to purchase that material from Russia.

In short, successful implementation of the HEU Agreement depends in significant part on the government's ability to use the antidumping laws to regulate the entry of LEU from foreign sources, so that downblending of weapons-grade HEU remains commercially feasible. The decision below effectively obliterates a crucial part of the framework that underlies the HEU Agreement, and thus stands as an obstacle to accomplishing the Agreement's objective of converting Russian nuclear warheads to peaceful uses.

2. Second, the court of appeals' decision threatens the ongoing economic viability of USEC, the only domestic entity that enriches uranium. Because other countries generally require that their nuclear products and technology be used only for peaceful purposes, USEC operates the only facility in the world that can produce nuclear materials for U.S. military use. Its continued survival is, accordingly, a matter of compelling importance to U.S. national security interests.

The government relies on USEC to supply enriched uranium for a variety of military purposes. USEC is the sole supplier of the LEU used to fuel the government-owned nuclear reactors that produce tritium, a radioactive isotope necessary to maintain the U.S. nuclear arsenal. USEC also supplies the enriched uranium required for the operation of the space nuclear program. In addition, the U.S. Navy's nuclear-powered submarines and aircraft carriers are fueled with HEU and rely upon its availability. When the current supply of that material is depleted, the Navy will require a sustainable domestic provider of HEU. Today, USEC is the only domestic provider of enrichment services.

USEC currently operates only one facility in the United States that can be used to produce enriched uranium for military purposes. That facility, which is located in Paducah, Kentucky, enriches uranium through gaseous diffusion, a process that is commercially obsolete at current prices. USEC is presently planning to replace the Paducah facility with a new centrifuge facility to produce LEU in Piketon, Ohio, for which USEC must raise significant capital in commercial markets. It will be difficult or impossible for USEC to raise that capital if investors do not view the U.S. market for enriched uranium as stable and profitable. If left unreviewed, the decision below would destabilize that market, threatening both the economic viability of the facility that USEC already operates as well as its plans to replace that facility with updated and more cost-effective technology. As a result, the decision

below, far from a garden-variety trade case, threatens the United States' ability to produce materials critical to military operations.

3. Finally, by radically limiting domestic industry's protection from imports of dumped enriched uranium, the decision below threatens to increase the United States' dependence on foreign energy sources. If Russia enjoys unfettered access to the market for LEU in the United States, its vast capacity for enrichment will weaken financial support for expansion of domestic enrichment capacity and leave the Russian Federation as the predominant supplier of enriched uranium for domestic electricity generation.

CONCLUSION

The petition for a writ of certiorari should be granted.

Respectfully submitted.

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[LOGO] *Independent Statistics & Analysis*
U.S. Energy Information Administration

2015 Uranium Marketing Annual Report

May 2016

Independent Statistics & Analysis
www.eia.gov

U.S. Department of Energy
Washington, DC 20585

Uranium purchases and prices

Owners and operators of U.S. civilian nuclear power reactors ("civilian owner/operators" or "COOs") purchased a total of 57 million pounds U_3O_8e (equivalent[1]) of deliveries from U.S. suppliers and foreign suppliers during 2015, at a weighted-average price of $44.13 per pound U_3O_8e. The 2015 total of 57 million pounds U_3O_8e increased 6% compared with the 2014 total of 53 million pounds U_3O_8e. The 2015 weighted-average price of $44.13 per pound U_3O_8e decreased 4% compared with the 2014 weighted-average price of $46.16 per pound U_3O_8e.

Six percent of the 57 million pounds U_3O_8e delivered in 2015 was U.S.-origin uranium at a weighted-average

[1] Uranium quantities are expressed in the unit of measure U_3O_8e (equivalent). U_3O_8e is uranium oxide (or uranium concentrate) and the equivalent uranium-component of uranium hexafluoride (UF_6) and enriched uranium.

price of $43.86 per pound. Foreign-origin uranium accounted for the remaining 94% of deliveries at a weighted-average price of $44.14 per pound. Uranium originating in Kazakhstan, Russia and Uzbekistan accounted for 37% of the 57 million pounds. Australian-origin and Canadian-origin uranium together accounted for 47%. The remaining 10% originated from Bulgaria, Czech Republic, Malawi, Namibia, Niger, and South Africa.

COOs purchased uranium of three material types for 2015 deliveries from 36 sellers, two more than in 2014. Uranium concentrate was 55% of the 57 million pounds U_3O_8e delivered in 2015. Natural UF_6 was 30% and enriched UF_6 was 15%. During 2015, 21% of the uranium was purchased under spot contracts at a weighted-average price of $36.80 per pound. The remaining 79% was purchased under long-term contracts at a weighted-average price of $46.04 per pound. Spot contracts are contracts with a onetime uranium delivery (usually) for the entire contract and the delivery is to occur within one year of contract execution (signed date). Long-term contracts are contracts with one or more uranium deliveries to occur after a year following the contract execution (signed date) and as such may reflect some agreements of short and medium terms as well as longer term.

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Table 3. Uranium purchased by owners and operators of U.S. civilian nuclear power reactors by origin country and delivery year, 2011-15

thousand pounds U_3O_8 equivalent; dollars per pound U_3O_8 equivalent

	Deliveries in 2011		Deliveries in 2012		Deliveries in 2013		Deliveries in 2014		Deliveries in 2015	
Origin country	Purchases	Weighted-average price	Purchases	Weighted-average price	Purchases	Weighted-average price	Purchases	Weighted-average price	Purchases	Weighted-average price
Australia	6,001	57.47	6,724	51.17	10,741	49.92	10,511	48.03	9,678	44.16
Brazil	W	W	W	W	W	W	W	W	0	–
Bulgaria	0	–	0	–	0	–	0	–	W	W
Canada	10,832	56.08	13,584	56.75	7,808	52.61	9,789	45.87	16,876	45.84
China	W	W	W	W	W	W	W	W	0	–
Czech Republic	0	–	0	–	W	W	W	W	W	W
Germany	0	–	0	–	W	W	0	–	0	–
Hungary	0	–	0	–	W	W	0	–	0	–
Kazakhstan	9,728	53.71	6,234	51.69	6,454	46.73	12,032	44.47	10,723	42.82
Malawi	780	65.44	W	W	1,277	59.89	1,514	44.94	W	W
Namibia	6,199	56.74	5,986	54.56	5,677	49.78	4,603	45.54	3,456	48.57
Niger	1,744	54.38	2,133	50.45	1,666	51.26	1,316	43.86	922	39.74
Portugal	0	–	0	–	W	W	0	–	0	–
Russia	10,199	56.57	7,643	54.40	10,580	53.73	6,859	45.65	9,063	40.87
South Africa	1,524	53.62	1,243	56.45	186	46.72	938	43.71	826	37.64
Ukraine	W	W	W	W	0	–	W	W	0	–
United Kingdom	0	–	0	–	0	–	W	W	0	–
Uzbekistan	1,808	55.99	2,576	52.80	3,064	50.02	1,779	46.84	1,040	47.90
unknown	0	–	0	–	W	W	W	W	W	W
Foreign Total	**49,626**	**55.98**	**47,713**	**54.07**	**47,919**	**51.13**	**50,033**	**46.03**	**53,106**	**44.14**
United States	5,205	52.12	9,808	59.44	9,484	56.37	3,316	48.11	3,419	43.86
Total Purchases	**54,831**	**55.64**	**57,520**	**54.99**	**57,403**	**51.99**	**53,349**	**46.16**	**56,524**	**44.13**

W = Data withheld to avoid disclosure of individual data. – = Not applicable.

Notes: Totals may not equal sum of components because of independent rounding. Weighted-average prices are not adjusted for inflation.

Source: U.S. Energy Information Administration: Form EIA-858 "Uranium Marketing Annual Survey" (2011-15).

[LOGO] **U.S. DEPARTMENT OF ENERGY**

Excess Uranium Inventory Management Plan

Report to Congress
July 2013

United States Department of Energy
Washington, DC 20585

I. LEGISLATIVE LANGUAGE

This report responds to legislative language set forth in Consolidated Appropriations Act, 2012 (Public Law 112-74, div. B, tit. III), Section 312 (c), wherein it is stated:

> *"(c) Not later than June 30, 2012, the Secretary shall submit to the House and Senate Committees on Appropriations a revised excess uranium inventory management plan for fiscal years 2013 through 2018."*

II. INTRODUCTION

Uranium Inventory Management Principles and Objectives

This Excess Uranium Inventory Management Plan (2013 Plan) seeks to provide the public and interested stakeholders more specific information and enhanced transparency regarding Department of Energy (DOE) management of potentially marketable uranium inventories. The Office of Nuclear Energy, the Office of Environmental Management (EM), and the National Nuclear Security Administration (NNSA) are the organizations within DOE that coordinate the management of these inventories, which exist in the forms of highly enriched uranium (HEU), low-enriched uranium (LEU), natural uranium (NU) in the form of uranium hexafluoride (UF_6), and depleted uranium hexafluoride (DUF_6). The Department has prepared the 2013 Plan to replace the Department of Energy Excess Uranium Inventory Management Plan (DOE 2008; hereinafter referred to as the 2008 Plan) and to reflect updated and evolving information, programs, and mission needs since the 2008 Plan was issued. The 2013 Plan identifies uranium inventories that have entered the uranium market since the 2008 Plan and those anticipated to potentially enter the market through the end of Calendar Year (CY) 2018. Among the changes described in the 2013 Plan are additions to and deletions from the inventory and changes to DOE's uranium management strategy.

On December 16, 2008, the Department released the 2008 Plan, providing information about transactions planned or under consideration by the Department for the disposition of its excess uranium consistent. The Department is committed to managing excess inventories in a manner that:

1. Is consistent with all applicable legal requirements,

2. Maintains sufficient uranium inventories to meet the current and reasonably foreseeable needs of DOE missions,

3. Undertakes transactions involving non-U.S. Government entities in a transparent and competitive manner, and

4. Is consistent with and supportive of the maintenance of a strong domestic uranium industry.

The 2008 Plan included reference to a Departmental guideline that, as a general matter, the introduction into the domestic market of uranium from Departmental inventories in amounts that do not exceed 10 percent of the total annual fuel requirements of all nuclear power plants should not have an adverse material impact on the domestic uranium mining, conversion, or enrichment industry.[2] The 2008 Plan noted that the Department might introduce into the domestic market, in any given year, less than that amount, or, in some years for certain special purposes such as

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[2] Even with this guideline, any transfer subject to section 3112(d) of the USEC Privatization Act still underwent a market impact analysis to ensure there was no adverse material impact.

the provision of initial core loads for new reactors, more than that amount. Based on experience gained since issuance of the 2008 Plan[3], including in particular the market impact analysis that supported the May 15, 2012 Secretarial Determination (the May 2012 Determination), the Department has determined that it can meet its statutory and policy objectives in regard to DOE uranium sales or transfers without an established guideline. In addition, as discussed below, decisions to introduce uranium into the market pursuant to section 3112(d) must be reviewed every two years. Accordingly, the 10 percent guideline will no longer be used.

The Department remains committed to the maintenance of a strong domestic uranium industry and will conduct uranium transactions, where applicable, in accordance with Section 3112(d) of the United States Enrichment Corporation (USEC) Privatization Act (Public Law 104-134), which states that sales or transfers of natural or LEU from DOE's stockpile must meet the following criteria:

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[3] Subsequent to issuance of the 2008 Plan, in 2009 the Department issued its "Finding of No Significant Impact: Disposition of DOE Excess Depleted Uranium, Natural Uranium, and Low Enriched Uranium." 74 Fed. Reg. 31420 (July 1, 2009); DOE/EA-1607. In the mitigation action plan (MAP) of that finding, DOE determined that any potentially significant impacts on the domestic uranium industry from the sale or transfer of depleted uranium could [sic] addressed by conducting a market impact analysis similar to those conducted in accordance with section 3112(d) and, if necessary, adjusting sales or transfers to avoid or mitigate any potentially significant impacts.

1. The President determines the material is not necessary for national security needs;

2. The Secretary determines that the sale of the material will not have an adverse material impact on the domestic uranium mining, conversion, or enrichment industry, taking into account the sales of uranium under the Russian HEU Agreement, and the Suspension Agreement; and

3. The price paid to the Secretary will not be less than the fair market value of the material.

Section 3112(d) of the USEC Privatization Act only covers transfers of natural or enriched uranium, but the Department also considers and analyzes the potential market impacts of transactions involving DUF_6 and structures those transactions to mitigate any significant impact on the domestic uranium mining, conversion, or enrichment industry.

Further, Section 312(a) of the Consolidated Appropriations Act, 2012 provides that all determinations pursuant to Section 3112(d)(2)(B) are only valid for two calendar years. Thus, the Department will revisit its analyses of market impacts and issue new Determinations every two years for transfers covered under Section 3112(d) if it seeks to continue the covered transactions. As in the past, the Department's analysis of potential market impacts under Section 3112(d) will account for all Departmental uranium sales or transfers into the market in the relevant period – including any that may fall outside of Section 3112(d) – to determine potential market impacts. Taken together, these

legal requirements and actions by the Department protect the interests of the domestic uranium industry in an effective and reasonable manner while providing the Department with the necessary flexibility to meet its programmatic needs and responsibilities. Lastly, any updates to the 2013 Plan, May 2012 Determination, or any subsequent Secretarial Determinations required by Section 312(a) of Consolidated Appropriations Act, 2012, would provide the public and the domestic uranium industry with information and transparency regarding the Department's planned uranium sales or transfers.

Changing Departmental priorities may require changes to plans or schedules for sale or transfer of uranium that cannot be anticipated at this time. This includes the possibility that uranium that is now directed to national security needs might be declared to be excess and, conversely, that uranium now considered to be excess might be redirected to national security needs. Although the focus of this Plan includes those transactions being considered by the Department through CY 2018, the final disposition of DOE's excess uranium inventories could take at least 20 years when all inventories are considered.

The May 2012 Determination (Appendix A) effectively sets forth uranium transfers being considered during the time span of this Plan. Any additional transfers

will be evaluated separately using the same requirements described in this Plan.[4] The May 2012 Determination specifically considered the following potential transfers:

1. Up to 9,082 metric tons uranium (MTU) of DUF_6 to Energy Northwest (ENW) in CYs 2012 and 2013, which would be immediately followed by enrichment to LEU equivalent to 482 MTU, with ENW utilizing a portion of the LEU for fueling the nuclear power reactor it operates. The remaining LEU would be sold as LEU or, in its component parts, as NU and separative work units (SWUs) to the Tennessee Valley Authority (TVA) as part of a commercial transaction to support future power generation and tritium production from 2013 through 2030, thereby serving national security purposes.

2. Up to 2,400 MTU per year of NU to DOE contractors as compensation for cleanup services at the Gaseous Diffusion Plant (GDP) sites at Paducah, Kentucky, or Portsmouth, Ohio, in quarterly transfers of up to 600 MTU for the period 2012 through 2021.

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[4] A more recent Secretarial Determination, dated March 15, 2013, covering a one-time transaction resulting in the transfer of 299,000 SWU, the enrichment component of 47.6 MTU of LEU, is described below.

3. Up to 400 MTU NU equivalent per year contained in LEU transferred to NNSA contractors for down-blending HEU to LEU for the period 2012 through 2020.

* * *

United States Government Accountability Office

GAO

Report to Congressional Committees

September 2011

EXCESS URANIUM INVENTORIES

Clarifying DOE's Disposition Options Could Help Avoid Further Legal Violations

[LOGO]

[LOGO]

Why GAO Did This Study

Uranium is a key component in the production of nuclear energy and nuclear weapons. The Department of Energy (DOE) manages the nation's surplus uranium, which is derived in part from former nuclear weapons production. In 2008, DOE published a uranium management plan that set a target for DOE uranium sales and transfers to avert harm to the domestic uranium industry. In 2009, DOE began using natural uranium to pay for cleanup work at a former uranium enrichment facility in Ohio, without having identified such transactions in its 2008 plan.

As directed, GAO reviewed DOE's uranium management program. This report examines (1) DOE's uranium transactions and plans for future transactions, (2) the extent to which these transactions were consistent with DOE's uranium management plan, and (3)

the extent to which these transactions were consistent with federal law. GAO reviewed transaction documents and contracts and interviewed knowledgeable DOE, contractor, and uranium industry officials and uranium market analysts.

What GAO Recommends

GAO recommends that DOE update its uranium management plan and suggests that Congress consider authorizing DOE to, among other things, retain the proceeds of future uranium transactions. DOE agreed to update its uranium management plan but disagreed that its actions did not comply with federal fiscal law. GAO maintains, however, that DOE's comments do not undermine the conclusion that the department violated the miscellaneous receipts statute.

View GA0-11-846 or key components.

For more information, contact Gene Aloise at (202) 512-3841 or aloisee@gao.gov.

September 2011

EXCESS URANIUM INVENTORIES

Clarifying DOE's Disposition Options Could Help Avoid Further Legal Violations

What GAO Found

In a series of seven transactions from December 2009 through June 2011, DOE used 1,873 metric tons of natural uranium to pay for $256 million in cleanup services provided by two contractors at the Portsmouth, Ohio, enrichment facility, and additional transactions are planned. Six out of seven of these transactions involved the United States Enrichment Corporation (USEC), former operator of the Portsmouth facility. DOE released 1,473 metric tons of uranium, and USEC provided $194 million in cleanup services at the Portsmouth facility. Among other activities, USEC's services included removing chemical and hazardous materials from the plant. The seventh transaction involved a second contractor. In June 2011, DOE released 400 metric tons of uranium, and the contractor agreed to provide $62 million in decontamination and decommissioning services. DOE officials said the department expects to continue transferring natural uranium to this contractor for cleanup services through 2013.

DOE's uranium transactions have been consistent with parts of its uranium management plan but not with others. The plan states that DOE would adhere to a target for uranium sales and transfers of no more than 10 percent of annual domestic fuel requirements

for uranium. DOE's releases of uranium into the commercial market did not exceed the annual target specified in the plan, ranging from 5 percent of demand in 2008 to 6 percent in 2010 – well below the 2008 plan's designated target. With regard to other provisions, however, DOE has departed somewhat from the plan. For example, the department has deviated from the schedule of uranium transfers articulated by the plan, allowing more uranium to enter the market sooner than cited.

DOE's uranium transactions with USEC were sales authorized by the USEC Privatization Act, but they did not comply with federal fiscal law. The USEC Privatization Act requires that before a uranium sale, DOE must determine that the materials are surplus to national security needs; that the department is receiving fair market value; and that the sales will not adversely affect the domestic uranium mining, conversion, and enrichment industries. GAO found that DOE met these requirements. Nevertheless, by not depositing the value of the net proceeds from the sales of uranium into the Treasury, DOE violated the miscellaneous receipts statute. This statute requires an official or agent of the government receiving money from any source on the government's behalf to deposit the money in the Treasury. As GAO found when it reviewed a similar series of transactions in 2006, DOE provided the uranium to USEC for sale to a third party and allowed USEC to keep the proceeds of the sales. Even with no money changing hands, GAO concludes that an amount equivalent to the value that went to

USEC should have gone to the Treasury. By not depositing an amount equal to the value of the uranium into the Treasury, DOE has inappropriately circumvented the power of the purse granted to Congress under the Constitution.

[LOGO]

September 26, 2011

The Honorable Dianne Feinstein
Chairman
The Honorable Lamar Alexander
Ranking Member
Subcommittee on Energy and Water Development
Committee on Appropriations
United States Senate

The Honorable Rodney P. Frelinghuysen
Chairman
The Honorable Peter J. Visclosky
Ranking Member
Subcommittee on Energy and Water Development
Committee on Appropriations
House of Representatives

Uranium – a naturally occurring radioactive element – is used in nuclear weapons as well as in fuel for nuclear power plants. In the United States, 20 percent of the nation's electricity comes from nuclear power, and growing energy demand and concerns about carbon dioxide emitted when fossil fuels are burned have sparked interest in increasing the use of nuclear power. A healthy and reliable domestic uranium industry is considered essential to ensuring that nuclear

power remains a viable option for supplying the nation's energy needs.

From the 1940s, the Department of Energy (DOE) and its predecessor agencies have processed uranium as a source of nuclear material for defense and commercial purposes. A key step in this process is the enrichment of natural uranium, which raises its concentration of uranium-235, the form, or isotope, that undergoes fission to release enormous amounts of energy in nuclear reactors and weapons. The enrichment process results in two principal products: (1) enriched uranium hexafluoride, which can be further processed for specific uses, such as nuclear weapons or fuel for power plants, and (2) leftover "tails" of uranium hexafluoride, which are also called depleted uranium because the material is depleted in uranium-235 compared with natural uranium. Since 1993, uranium enrichment activities at DOE-owned uranium enrichment plants have been performed by the United States Enrichment Corporation (USEC), a former government-owned corporation that was privatized in 1998.

DOE maintains inventories of natural, enriched, and depleted uranium in excess of its needs. This inventory comes from a variety of sources, including the dismantling of some of the nation's nuclear weapons or leftover material from before 1993. The department stores most of its uranium at its Portsmouth Gaseous Diffusion Plant, a uranium enrichment facility in Piketon, Ohio, that ceased operations in 2001, and at its Paducah Gaseous Diffusion Plant, a similar facility currently operated by USEC in Paducah, Kentucky.

In March 2008, we reported on DOE's options for its inventory of depleted uranium.[1] We recommended that the department develop a comprehensive uranium management assessment containing detailed information on the types and quantities of depleted, natural, and enriched uranium managed by DOE and a comprehensive assessment of the department's options for this material. In December 2008, with input from the uranium industry, DOE published its "Excess Uranium Inventory Management Plan" detailing the amount of uranium held by the department and what plans it had at that time for selling or transferring uranium to the commercial market. The purpose of DOE's plan was to provide the general public and interested stakeholders more specific information and enhanced transparency with respect to DOE's preliminary plans for its excess uranium transactions.[2] The plan detailed the amount and type of uranium in the department's possession and DOE's disposition strategy at the time. Among other details in the plan, DOE committed to generally restricting its annual uranium sales and

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[1] GAO, *Nuclear Material: DOE Has Several Potential Options for Dealing with Depleted Uranium Tails, Each of Which Could Benefit the Government*, GAO-08-606R (Washington, D.C.: Mar. 31, 2008).

[2] According to DOE officials, the objectives of DOE's plan were to: (1) enhance the value and usefulness of DOE's uranium; (2) reduce DOE programmatic costs by decreasing uranium inventories; (3) meet key nonproliferation objectives; and (4) dispose of unmarketable material to facilitate the cleanup of DOE's uranium enrichment plants, in addition to minimizing any material adverse impacts on the domestic uranium industry.

transfers to 10 percent of domestic nuclear fuel requirements but also noted that it may exceed 10 percent in any given year for certain special purposes. Shortly thereafter, in July 2009, DOE announced its intent to use some of its natural uranium to compensate USEC – in lieu of cash payment – for accelerated environmental cleanup work the company was conducting at the Portsmouth facility. This work was intended to prepare the facility for decontamination and decommissioning. In August 2010, DOE entered into a new contract with the firm Fluor-B&W Portsmouth to decontaminate and decommission the Portsmouth facility.[3] Subsequently, DOE announced a second round of uranium transactions – this time with the new contractor instead of USEC – to similarly compensate it for some of its services at Portsmouth.

The conference report accompanying the fiscal year 2010 Energy and Water Development and Related Agencies Appropriations Act directed us to review DOE's overall uranium management plan, including the department's oversight and implementation strategy, and to assess certain uranium transactions for

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[3] Fluor-B&W Portsmouth LLC is a partnership between Fluor Federal Services, Inc., a subsidiary of Fluor Corporation, an engineering and construction management firm, and Babcock & Wilcox Technical Services Group, a subsidiary of the Babcock & Wilcox Company, a firm that owns and operates large nuclear facilities. Both companies have experience in the handling and disposal of nuclear waste and materials and have worked with DOE to clean up other nuclear weapons facilities across the United States.

consistency with federal law.[4] Accordingly, this report examines (1) DOE's transactions using its excess uranium and its plans for such transactions in the future, (2) the extent to which these transactions have been consistent with DOE's excess uranium management plan, and (3) the extent to which these transactions are consistent with federal law.

To examine DOE's uranium transactions for cleanup services, we reviewed, among other things, DOE documents detailing the transactions the department has engaged in involving its uranium, assessments of the value of uranium in each transaction, and analyses of the impact of DOE's activities on the uranium market. To examine the extent to which DOE's activities have been consistent with its excess uranium management plan, we analyzed the plan and compared the uranium activities the plan projected against DOE's actual uranium transactions. To determine the extent to which DOE's uranium transactions are consistent with federal law, we reviewed statutes governing DOE's uranium activities, including the USEC Privatization Act, as well as relevant fiscal laws, such as the miscellaneous receipts statute.[5] For all of our objectives, we interviewed officials at DOE's headquarters in Washington, D.C., and at the Portsmouth/Paducah Project Office in

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[4] H.R. Rep. No. 111-278, at 121-22 (2009) (accompanying Energy and Water Development and Related Agencies Appropriations Act, 2010, Pub. L. No. 111-85, 123 Stat. 2845).

[5] USEC Privatization Act, 42 U.S.C. §§ 2297h-2297h-13 (2006); miscellaneous receipts statute, 31 U.S.C. § 3302(b) (2006).

Lexington, Kentucky. We interviewed uranium industry representatives at selected mining, milling, conversion, enrichment, and fabrication firms about DOE's uranium management plan, the commercial uranium market, and the impact of DOE's activities on the uranium industry. We selected firms in the uranium industry to obtain information from each stage of the nuclear fuel cycle. We also interviewed nuclear industry trade representatives, market analysts, uranium brokers, and utilities. Appendix I describes our scope and methodology in more detail.

We conducted this performance audit from November 2010 through September 2011, in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

* * *

79TH CONGRESS } SENATE { REPORT
2d Session } { NO. 1211

Calendar No. 1251

ATOMIC ENERGY ACT OF 1946

APRIL 19 (legislative day, MARCH 5), 1946.
– Ordered to be printed

MR. MCMAHON, from the Special Committee on Atomic Energy, submitted the following

REPORT

[To accompany S. 1717]

The Special Committee on Atomic Energy, to whom were referred various bills for the control of atomic energy, report back to the Senate S. 1717 with amendment and recommend that the bill do pass. The report submitted herewith outlines in part I the history of the work of the special committee to date, with statements on all other bills and resolutions referred to it and not reported out at this time. Part II consists of an analysis and discussion of each section of S. 1717, giving the reasons behind the various provisions. The appendix to this report contains certain basic information on atomic energy essential to an understanding of the scientific and technical development which forms the background of this legislation.

* * *

2. *Source materials.* – A source material is any material determined by the Commission to be peculiarly essential to the production of fissionable material. The relation of source material to nuclear energy may be thus portrayed:

Source material plus processing→ Fissionable material.
Fissionable material plus processing→ Atomic (i. e., nuclear) energy.

Source materials include uranium and thorium and ores containing uranium and thorium in such proportions as may be set by the Commission.

The principle of Government monopoly which the committee has adopted as essential in reference to the production and ownership of fissionable materials is not extended to the ownership, mining or refining of source materials. Nevertheless, the committee recognizes the necessity of giving to the Commission the power to control supplies and transfers of source material by means of licensing procedures.

While source materials in their natural state are not capable of dangerous misuse, they are, as their name indicates, the source of all fissionable material and must accordingly be conserved as the Nation's most valuable mineral resource. The Commission must be assured an adequate and continuing supply of source materials for the operation of its production facilities for military or developmental purposes. The Commission is therefore empowered to take, in return for just compensation, supplies of source materials

wherever found, or interests in real property containing such materials.

* * *

ATOMIC ENERGY

HEARINGS

BEFORE THE

COMMITTEE ON MILITARY AFFAIRS

HOUSE OF REPRESENTATIVES

SEVENTY-NINTH CONGRESS

FIRST SESSION

ON

H. R. 4280

AN ACT FOR THE DEVELOPMENT
AND CONTROL OF ATOMIC ENERGY

OCTOBER 9 AND 18, 1945

Printed for the use of the
Committee on Military Affairs

[LOGO]

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1945

* * *

[125] Mr. JOHNSON. I do not know whether this has been brought out or not, but, as I understand it, uranium is found in ledges in the mountains just like other kinds of ore. Is it found in the same strata or near

the same strata as gold and silver and iron, for instance?

Dr. COMPTON. I am not well informed, Mr. Johnson, with regard to the occurrence of uranium, but it is widespread in its occurrence.

Mr. JOHNSON. Is uranium itself, without applying to it some industrial process, dangerous?

Dr. COMPTON. No; it is not.

Mr. JOHNSON. In other words, before there is any danger you have to put it through a process, capture it and confine it and then provide a way to explode it?

Dr. COMPTON. Yes; that is correct.

Mr. JOHNSON. The impression I got from the hearings was that any activity that has to do with uranium is dangerous. Is that a fallacy?

Dr. COMPTON. It is a fallacy. The only reason that one might consider it dangerous is because information might come out of it that might lead to something else, or something of that kind. But it is perfectly possible with safety to do experiments on a small scale with uranium.

Mr. JOHNSON. There are a great many commercial uses to which this element is put, which could be done in laboratories without any danger to anyone?

Dr. COMPTON. Yes.

Mr. JOHNSON. The only danger that has been exposed so far is the fact that you can put it together in a form where it is highly explosive. Is that correct?

Dr. COMPTON. Even that is exaggerated. Uranium, until it has gone through the process of separation to uranium 235, can at most produce atomic power and not atomic explosions.

* * *

SEN. LISA MURKOWSKI HOLDS A HEARING ON THE NOMINATION OF RICK PERRY TO BE SECRETARY OF ENERGY

January 19, 2017

WASHINGTON, D.C.

Committee on Energy and Natural Resources. Senate

* * *

MURKOWSKI: Thank you, Senator King.

Senator Portman?

PORTMAN: Thank you.

And, Governor Perry, thank you for your willingness to step up and . . .

PERRY: Yes, sir.

PORTMAN: . . . serve again in a different way and your family for sacrifices that involves. I enjoyed our meeting. Apparently it wasn't as scintillating at the conference table here than – as your one on the couch with my colleague from Minnesota.

PERRY: Yes, sir.

PORTMAN: But it was interesting.

PERRY: Yes, it was.

PORTMAN: And we talked about a number of topics. One was the importance to my state and to our nation of having a uranium enrichment capability. In Piketon, Ohio we have a plant that produced enriched uranium until about 2000. At that point, it was shut down.

It was the gaseous diffusion method. It's now being cleaned up.

When President Obama ran in 2008, he promised to accelerate that cleanup. In fact, just the opposite has happened. Pretty much every year we've had to fight just to keep the cleanup in place. It's gone from a 2024 timeframe to a 2044 end date, costing taxpayers, by the way, billions more by stretching it out and not being more efficient about it.

And I'm very disappointed in the Department of Energy for their inability to follow through on their commitments to the plant. And, frankly, it's really difficult for people who work there. They just never know if their next paycheck is going to be there and this usually happens around Christmas time as it did in this past Christmas.

So one question for you. Would you be committed to looking at this cleanup effort in a more logical way, helping to ensure we have the funds necessary to be able to expedite that cleanup, which, again, provides security to these families but, importantly, lowers the cost for the taxpayer by getting this cleanup done?

PERRY: Senator, I will commit to you that I will become as educated on this issue as I can in the most expeditious way that I can manage it and – and employ management skills and capabilities. I – I – again, without knowing the deep details of this. But my instinct tells me that this is an issue of execution of good management of – of the . . .

PORTMAN: I thank – I thank you for that and I'll put you on the spot here further. Secretary Moniz, when he went through his confirmation hearing, committed to come to the site. We never managed to work that out. I'd love for you to see this site. It's a couple thousand acres.

As I've told you, it has incredible infrastructure, electricity and water. It would be a great site for a future plant, including a power plant, including a nuclear power plant. The community is very supportive.

Would you commit to come out and to see this yourself, to see the huge investment the Department of Energy has made into this facility?

PERRY: Senator, I will commit to that and I will suggest that you know how to get a hold of me if I don't show up on a timely basis for you.

PORTMAN: Great. Well, thank you.

And then, second, we started a new centrifuge technology project there a few years ago. We were excited about that. In late 2015, without any notice, the Department of Energy shut that down.

Unfortunately, they had spent, you know, hundreds of millions of dollars of taxpayer money up to that point. Those centrifuges are still there. They're not spinning any more. They're apparently going to be sent to the desert, which is an enormous waste of taxpayer money.

We have no ability to enrich uranium in this country. We have to rely on foreigners at – at a time when we

have an increased volatility globally and at a time when, ironically, we're telling Iran they can go ahead and enrich uranium for their domestic purposes. We, as Americans, don't have the ability to do that.

My question for you there is would you also be willing to look into this issue? And, you know, I'm not going to ask you for a specific commitment today on restarting this because I know you need to research it, but I hope that you will give this your personal attention and – and objective consideration, because it seems to me we need to have enrichment capabilities in this country.

Do you have a response to that?

PERRY: Senator, I will give it the appropriate and thorough study. In addition, I will say that the enrichment of uranium in the United States is a national security issue and one that I take very seriously.

I look forward to working with you to not only understand this issue better but if it is concluded, as I suspect it will, that this is indeed a national security issue that needs to be addressed either by the United States Congress and/or the administration, you will have a willing partner in making sure that the DOE does it in the most efficient, most effective, and most economically feasible way that it can.

PORTMAN: Well, thank you, Governor. It is a national security issue. There's no question about it. Not just being reliant on foreign countries including Russia for uranium, but also because we need lowly-enriched uranium for tritium in the nuclear stockpile and, of

course, we need to have enriched uranium for our nuclear Navy.

And I know we have stockpiles now but we don't have the ability to be able to quickly be able to enrich. It probably takes a decade to get this back up and going if we shut it off altogether, and again, enormous cost to the taxpayers.

Finally, just one last question. We talked a lot about energy efficiency in our meeting. I told you about the fact this committee overwhelmingly had voted out an energy efficiency bill equivalent of taking 22 million cars off the road by 2030. We also passed it in the entire Senate 82 to 12 – 82 to 15, as I recall.

Both the ranking member and the chair have been at the forefront on this issue. I would like your commitment today that you'll comport with us on energy efficiency and help us to get that legislation across the line?

PERRY: Yes, sir. Use me as you see fit.

PORTMAN: Thank you, Madam Chair.

* * *

SEN. BARBARA BOXER HOLDS A HEARING ON MACFARLANE/SVINICKI NOMINATIONS

June 13, 2012

WASHINGTON, D.C.

Committee on Environment and Public Works. Senate

* * *

BOXER: OK. I've just been notified we're going to have two votes at noon. So, in order to give everybody a chance, we're just going to have to go down to three minutes apiece. I do deeply apologize. Senator Barrasso.

BARRASSO: Thank you, Madam Chairman. Just a couple of quick questions, Dr. Macfarlane. My home state of Wyoming and I know you were taking notes as [sic] an abundance of domestic uranium. Permitting of these sites has met with a lot of bureaucratic delay and red tape.

These sites – good paying jobs for American jobs for folks in my state, other states where uranium is found. Do you believe that the domestic uranium production is preferable to being dependent on importing foreign uranium from countries like Russia?

MACFARLANE: First of all, I should say that I think that Wyoming is one of the most beautiful states in the union. That aside, the job again of the Nuclear Regulatory agency is just to assure safety and security. Not to opine on policy positions but to – given that and my past views on things.

Certainly, it's important for the United States to have a diverse supply of energy as possible and to have as much domestic supply as possible as well.

BARRASSO: Thank you. What assurances can you provide the commission that you'll not unduly delay commission decisions or ensure that all the perspectives and opinions of your colleagues are dealt with in a respectful and timely manner?

MACFARLANE: I assure you wholeheartedly.

BARRASSO: Thank you. Commissioner Svinicki, you've had a number of questions asked to you today. I'm just wondering if there are any things, any comments you'd like to make to the Committee to kind of tie together or answer some of the charges that may have been made by others.

SVINICKI: I would reflect that – again, I was privileged to be a senate staff first. And for a long time, I have a tremendous respect for the Senates unique role under the constitution to review President Obama's nomination of May.

And I know that I've not achieved universal agreement in my actions and positions I've taken on the commission. I'm very respectful that there are different views. I think as Dr. Macfarlane has indicated, it's not an expectation that everyone agree with everyone.

And so, that standard was probably not within my reach but I have worked to assess issues based on the facts in front of me. And I've attempted to fulfill my duty in that way. Thank you.

BARRASSO: Thank you. Thank you and congratulations to both of you. Thank you, Madam Chairman.

* * *

S. HRG. 114-158

THE ADMINISTRATION'S QUADRENNIAL ENERGY REVIEW (QER)

HEARING

BEFORE THE

COMMITTEE ON ENERGY AND NATURAL RESOURCES UNITED STATES SENATE

ONE HUNDRED FOURTEENTH CONGRESS

FIRST SESSION

THE ADMINISTRATION'S QUADRENNIAL ENERGY REVIEW (QER)

APRIL 28, 2015

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Committee on Energy and Natural Resources

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* * *

[59] The CHAIRMAN. Thank you, Senator Franken. I look forward to working with you on some of these Office of Indian Energy issues.

Senator Cassidy.

Senator CASSIDY. Thank you.

Mr. Secretary, I am about to ask a bunch of questions I do not know the answer to.

Secretary MONIZ. We don't either. [Laughter.]

Senator CASSIDY. I hope you do, but if you say you do not, I accept that.

What has been in the news lately is the Uranium One sale to Russia. It may not be Uranium One, but the Canadian company that gave contributions to the Clinton Foundation, they had uranium mining rights across the world including the Western United States and subsequently have sold to a Russian concern.

There is a certain scandal involved. I am not here to discuss the scandal. What I am interested in is, and I think it is ARMZ that currently has these holdings, what percent of actively mined U.S. uranium resources are controlled by the Russian concern? Do you know that?

Secretary MONIZ. I do not. I wasn't aware of any, to be honest, but I don't know the answer. But I can look into that. I don't know the issue, I'm sorry. Yeah.

Senator CASSIDY. Okay, then if you do not know the issue it may not work for any of these because the second question would be I understand, again, that the Russians now claim to control a significant portion of world uranium deposits. In which case, can they choose to increase price by limiting supply? Again, I ask this for no other reason that I think there is national security issues at stake.

Secretary MONIZ. Again, I'll have to look at this. And I'm happy to get back to you.

However, it's a little bit surprising in a sense that I believe the largest reserves are in Kazakhstan and the second largest, I believe, are Australia.

[60] Senator CASSIDY. They own those too.

Uranium One had holdings. They combined with the South African firm, and they purchased Australia and the Kazak reserves or maybe the Russians already had the Kazak, but I think actually the Uranium One then purchased.

This is in a New York Times article.

Secretary MONIZ. I didn't see it, so, I'm sorry.

Senator CASSIDY. But they now own reserves in the Western United States which, I gather, are being exported to Canada, the mined material even though it is not allowed for Uranium One, but the trucking company is allowed to export. So it seemed, kind of, like a loophole.

Well, I will submit these questions for the record since you do not know the answers.

Secretary MONIZ. Okay.

Senator CASSIDY. Again, it just seems of incredible importance to our nati nal security and to our energy security, so that is why I ask.

Secretary MONIZ. Okay, well I'll look into it, sir.

Senator CASSIDY. Thank you.

* * *

October 5, 2010

The Honorable Timothy F. Geithner
Secretary
U.S. Department of the Treasury
Chairman, Committee on Foreign Investment in the United States
c/o Mr. Aimen Mir
Director, Office of Investment Security and Staff Chairperson, CFIUS
1500 Pennsylvania Avenue, N.W., Room 5221
Washington, D.C. 20220

Dear Mr. Secretary,

We are writing to express our great concerns regarding the pending sale of a uranium processing facility operated by Uranium One USA to Atomredmetzoloto, the mining arm of Rosatom, the Russian government agency that oversees Russia's nuclear industry. We believe that this transaction could threaten to impair the national security of the United States and respectfully urge the Committee to recommend the President block this transaction or postpone any action until the CFIUS has carefully evaluated the concerns outlined below and the separate Congressional review on the U.S.-Russia nuclear cooperation agreement has been completed.

On August 31, 2010, the parties announced that the ARMZ Uranium Holding Co. had purchased a controlling 51 percent interest share in Uranium One, Inc. Uranium One USA, the American subsidiary of Uranium One, Inc., operates a uranium processing facility

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On August 31, 2010, the parties announced that the ARMZ Uranium Holding Co. had purchased a controlling 51 percent interest share in Uranium One, Inc. Uranium One USA, the American subsidiary of Uranium One, Inc., operates a uranium processing facility

in Wyoming. The sale could reportedly give Russia control of about 20 percent of U.S. uranium extraction capacity.

ARMZ is the successor to the world's largest uranium producer built by the Soviet Union. ARMZ is the primary supplier of uranium feedstock to the Russian nuclear industry. ARMZ is wholly owned by Rosatom, which accounts for one-fifth of the new reactors under construction worldwide and 17 percent of global nuclear fuel fabrication.

Rosatom's specific activities – and the context within which it operates in Russia – should raise very serious concerns for United States national security interests.

Rosatom is a state-owned entity, overseen by a government that has shown little if any inclination to effectively address the widespread and continuing corruption within Russia, particularly its energy sector.

Moreover, Rosatom has been engaged in a series of ongoing and potential civilian nuclear activities that should raise red flags in the consideration of the purchase of Uranium One by the Rosatom subsidiary ARMZ:

Russia's Rosatom trained Iranian scientists and designed and built Iran's Bushehr nuclear power plant, which became operational in August, 2010. Russia now supplies this nuclear plant at Bushehr with enriched-uranium fuel rods and then is to remove the spent fuel

rods that could otherwise be used to make weapons-grade plutonium.

In 2007, Rosatom signed an agreement to help build nuclear facilities in Burma and train Burmese scientists, despite U.S. concerns about the Burmese regime. A State Department spokesman at the time said the following with regard to that agreement: "We would be concerned about the possibility for accidents, for environmental damage, or for proliferation simply by the possibility of fuel being diverted, stolen or otherwise removed."

Despite criticism by environmental and nonproliferation experts, Rosatom has launched a program to build and sell floating nuclear power plants to countries around the world, with little demonstrated intent or capability to protect those floating reactors from attack or theft of nuclear materials or from accidents that could have devastating and widespread impact. With regard to proliferation, some observers are concerned over the possibility that, by operating such a floating reactor far from its soil, a host nation might be able to bypass the proliferation guidelines of the Nuclear Suppliers Group and the International Atomic Energy Agency.

It is our understanding that the US Department of State itself has this year warned that the expansion of Russia in the area of nuclear energy could involve the appearance of new danger zones in the world.

Further, in a 2007 report on nuclear nonproliferation, the General Accounting Office noted that despite the

US Department of Energy's provision of access by Russian officials to sensitive nuclear sites in the United States, Rosatom "denied [GAO's] request for access to facilities . . . [and] denied DOE proposals for upgrading the sites including proposals with less intrusive access requirements, and informed DOE that it is not interested in pursuing [Materials Protection, Control and Accounting] MPC&A cooperation at these sites."

Russian entities are of particular concern with regard to foreign control of U.S. nuclear-related assets.

Since 1998, at least 19 different Russian entities have been placed under proliferation-related sanctions on over 20 different occasions. Indeed, a 2009 report by the Director of National Intelligence to Congress stated that Russian entities continue to sell technologies and components in the Middle East and South Asia that are dual use and could support WMD and missile programs. Additionally, the Department of Commerce lists eight Russian entities subject to license requirements for proliferation-related end-use or end-user controls, five of which are under "presumption of denial."

In addition to the Bushehr nuclear plant, Russia has also indicated its interest in building further nuclear reactors in Iran. This cooperation has caused great distress that it could advance Iran's nuclear ambitions, be it through the extraction of weapons-grade plutonium from the reactor or the use of Bushehr (and any future additional reactors) as a cover for the prohibited

transfer of other sensitive technology. It has also undermined longstanding efforts to compel Iran to abandon its pursuit of nuclear weapons.

Although Uranium One USA officials are reportedly skeptical that the transaction would result in the transfer of any mined uranium to Iran, we remain concerned that Iran could receive uranium supplies through direct or secondary proliferation.

However, the potential threat to U.S. security interests posed by the proposed transaction involving ARMZ (Rosatom) is not limited to Iran.

In May of this year, Russian President Dmitri Medvedev and Syrian leader Bashar al-Assad announced they were discussing future Russia-Syria nuclear cooperation.

Months later, in a report issued in September, the International Atomic Energy Agency (IAEA) stated that Syria continues to block its inspection of the nuclear facility destroyed by an Israeli airstrike in 2007 that had been built by North Korea for use in Syria's nuclear weapons program. Russia's eagerness to begin nuclear cooperation with Syria in these circumstances can only be seen in Damascus as strong backing for its nuclear ambitions, which is similar to the support Russia has given to Iran's nuclear program. The facilities, materials, technology, and expertise that could be provided to Syria, even for a "peaceful" program, would likely be used for a renewed weapons program, regardless of any assurances the Russians might provide. Russia's support for Syria's nuclear ambitions raises

particular proliferation concerns given Syria's status as a country of proliferation concern and a state sponsor of terrorism.

These are just a few of the national security concerns that have prompted strong opposition to the proposed U.S.-Russia nuclear cooperation agreement (123 Agreement) now under consideration by Congress. The agreement cannot be defended on its merits. Both, the Bush and Obama administrations, have been unable to certify that Russian officials, individuals, and organizations are not still assisting Iran's nuclear program, as has occurred on many occasions over the past two decades. That agreement has yet to be approved and may need to be taken up again in the next Congress, where it is likely to be subjected to much greater scrutiny and potential corrective action.

We believe the take-over of essential U.S. nuclear resources by a government-owned Russian agency, as would occur under the proposed transaction, would not advance the national security and interests of the United States. We urge the Committee to recommend the President block this transaction. In the alternative, we ask the Committee to consider postponing any action on the transaction involving Uranium One, Inc. and ARMZ until the Congressional review on the U.S.-Russia nuclear cooperation agreement has been completed.

We appreciate the opportunity to share our views and concerns with you.

Sincerely,

ILEANA ROS-LEHTINEN

SPENCER BACHUS

PETER KING

HOWARD P. McKEON

Forbes

America's Navy The Unsung Heroes Of Nuclear Energy

The United States has over 200 nuclear reactors producing power. You might be aware of the hundred or so commercial nuclear power reactors that produce just under 20% of our electricity. But there are another hundred nuclear reactors that power 86 submarines and aircraft carriers, producing electricity, heat, fresh water and propulsion.

America's Nuclear Navy is one of the oldest and largest nuclear organizations in the world and has *the* best safety record of any industry.

And no one ever discusses it.

But Naval Commander Djamal Pullom did just that, during the National Nuclear Science Week event at the Pacific Science Center in Seattle, Washington. The Navy is rather quiet about its phenomenal success, and CDR Pullom's presentation unfolded like a cozy mystery.

The Nuclear Navy has logged over 5,400 *reactor years* of accident-free operations and travelled over 130 million miles on nuclear energy, enough to circle the earth 3,200 times. The nuclear reactors can run for many, many years without refueling. They operate all over the world, sometimes in hostile environments, with no

maintenance support except their own crew. These reactors can ramp up from zero to full power in minutes, as fast as any natural gas-fired plant.

Thousands upon thousands of people have continuously lived, worked, eaten and slept within a stone's throw of a nuclear reactor for 60 years with no adverse effects at all. Annual radiation doses to Navy personnel have averaged only 0.005 rem/year (5 mrem/year; 0.05 mSv/year), a thousand times less than the Federal 5 rem/year allowed for radworkers.

From the time the *Father of the Nuclear Navy*, Admiral Rickover, developed and built the first ship of the nuclear navy, the *USS Nautilus* in 1954, to the present, no civilian or military personnel on these ships, which number over 22,000 thousand people at any one time today, has ever exceeded any Federal rad limit. And none of those more than a hundred thousand people has ever been harmed by the radiation from reactors or facilities with which they were so intimately in contact.

A recent report from the Naval Nuclear Propulsion Program Office provides very detailed information of personnel exposures from living and working in nuclear submarines and on nuclear ships, as well as working in the on-shore facilities that produced fuel and materials for the Nuclear Navy such as nuclear propulsion plants and nuclear component engineering plants.

While ordinary accidents occasionally occur as with any military operation, none have been related to nuclear or radiation, and no radiation health effects or reportable radiological accidents have ever happened in Navy history.

Our Nuclear Navy has to navigate some pretty unusual waters, but I am betting on them to keep doing so perfectly.

Dr. James Conca is a geochemist, an energy expert, an authority on dirty bombs, a planetary geologist and professional speaker. Follow him on Twitter@jimconca *and see his book at* Amazon.com

RECORD AND BRIEFS

No. 16-1275

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In The

Supreme Court of the United States

VIRGINIA URANIUM, INC., et al.,

Petitioners,

v.

JOHN WARREN, et al.,

Respondents.

On Petition For A Writ Of Certiorari To The United States Court Of Appeals For The Fourth Circuit

BRIEF IN OPPOSITION

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QUESTION PRESENTED

Whether the Atomic Energy Act of 1954 preempts Virginia's moratorium on uranium mining.

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IN THE SUPREME COURT OF THE UNITED STATES

VIRGINIA URANIUM, INC., ET AL., PETITIONERS,

v.

JOHN WARREN, ET AL., RESPONDENTS.

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT

BRIEF IN OPPOSITION

STATEMENT OF THE CASE

Although petitioners disputed it below, they now concede that the district court and court of appeals correctly held that the Atomic Energy Act of 1954 does not regulate conventional uranium mining on nonfederal lands. That concession is dispositive. Because such mining is outside of its purview, nothing in the Act prevents States from regulating or banning such mining, *regardless* of the State's alleged purpose. The cases on which petitioners rely, by contrast, involved activities that were directly regulated by the Nuclear Regulatory Commission, such as the construction of nuclear power plants and the disposal of nuclear waste—activities that, under 42 U.S.C. § 2021(k), States may regulate only for non-radiological safety purposes. Certiorari is unwarranted here because the

decision below conflicts neither with this Court's precedents nor with the decision of any other court.

A. Congress enacts the Atomic Energy Act but consistently declines to regulate conventional uranium mining.

The Atomic Energy Act of 1946 created the Atomic Energy Commission and conferred upon the Commission broad authority over the production of fissionable materials, control of nuclear materials, and the use of atomic energy.[1] The Act defined "source material" to include uranium ore.[2] It treated all source material found on federal lands as the property of the Government[3] and authorized the Commission to purchase or condemn other property as necessary to acquire such source material.[4]

The 1946 Act did not regulate or address the mining of source material on nonfederal land. Instead, it required a license issued by the Commission before any person could "transfer or deliver, receive possession of or title to, or export from the United States any source material *after removal from its place of deposit in nature*."[5] Senator McMahon, the bill's sponsor,

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[1] Atomic Energy Act of 1946, Pub. L. No. 79-585, §§ 1-20, 60 Stat. 755, 759-75.

[2] *Id.* § 5(b)(1), 60 Stat. at 761.

[3] *Id.* § 5(b)(7), 60 Stat. at 762.

[4] *Id.* § 5(b)(5), 60 Stat. at 762.

[5] *Id.* § 5(b)(2), 60 Stat. at 761 (emphasis added). Similarly, while Congress authorized the Commission to require reports from any person concerning "ownership, possession, extraction,

explained that the drafters had "not attempted to take over all the uranium in the United States."[6] Rather, the 1946 Act "provided the Commission with the power to condemn and pay just compensation for any uranium supplies which it is unable to buy in the open market."[7]

The Atomic Energy Act of 1954 superseded the 1946 Act.[8] While the 1946 Act "contemplated that the development of nuclear power would be a Government monopoly," the 1954 Act reflected Congress's conclusion "that the national interest would be best served if the Government encouraged the private sector to become involved in the development of atomic energy for peaceful purposes under a program of federal regulation and licensing."[9]

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refining, shipment, or other handling of source materials," it barred the Commission from requiring reports with respect to "any source material prior to removal from its place of deposit in nature." *Id.* § 5(b)(4), 60 Stat. at 761.

[6] 92 Cong. Rec. 6,073, 6,082 (June 1, 1946).

[7] *Id.*; *see also id.* at 6,096 ("[T]he bill enables the Commission to acquire stocks of this material or lands containing deposits of this material by purchase or through exercise of the right of eminent domain.") (statement of Sen. McMahon); S. Rep. No. 79-1211, at 18 (1946) ("The principle of Government monopoly which the committee has adopted as essential in reference to the production and ownership of fissionable materials is not extended to the ownership, mining or refining of source materials."); 92 Cong. Rec. 9,245, 9,268 (July 17, 1946) (statement of Rep. Shafer) (quoting Senate report).

[8] Atomic Energy Act of 1954, Pub. L. No. 83-703, 68 Stat. 919 (codified as amended at 42 U.S.C. § 2011 et seq.).

[9] *Duke Power Co. v. Carolina Envtl. Study Grp., Inc.*, 438 U.S. 59, 63 (1978).

Like its predecessor, the 1954 Act did not address or regulate uranium mining on nonfederal lands. Section 62, now codified at 42 U.S.C. § 2092, retained the language from the earlier law requiring a license from the Commission to transfer source material "*after* removal from its place of deposit in nature."[10] The 1954 Act also reenacted the provisions of the 1946 Act enabling the Commission to sell or lease source material found on federal lands and to acquire lands containing source materials through purchase or condemnation.[11]

Of the numerous amendments to the 1954 Act, three have particular relevance to this case.

First, Congress amended the Act in 1959 by adding § 274, entitled "Cooperation with States," now codified at 42 U.S.C. § 2021.[12] Section 2021 recites that it was intended "to clarify the respective responsibilities . . . of the States and the Commission with respect to the regulation of byproduct, source, and special nuclear materials," and "to establish procedures and criteria for discontinuance of certain of the Commission's regulatory responsibilities with respect" to those materials and "the assumption thereof by the States."[13]

---

[10] 42 U.S.C. § 2092 (emphasis added). The 1954 Act likewise prohibited the Commission from requiring reports of the ownership, possession, extraction, refining, shipment, or other handling of source material "prior to removal from its place of deposit in nature." 42 U.S.C. § 2095.

[11] *Id.* §§ 2096, 2097.

[12] Act of Sept. 23, 1959, Pub. L. No. 86-373, 73 Stat. 688 (codified as amended at 42 U.S.C. § 2021).

[13] 42 U.S.C. § 2021(a)(1), (4).

The 1959 Act sought "generally to increase the States' role."[14]

Section 2021 allows certain activities regulated by the Commission to be regulated by the States instead. Section 2021(b) authorized the Commission to enter into discontinuance-and-assumption agreements with States with respect to source, byproduct, or special nuclear materials to enable States "to regulate the materials covered by the agreement for the protection of the public health and safety from radiation hazards."[15] A State desiring to assume such authority must certify to the Commission's satisfaction "that the State has a program for the control of radiation hazards adequate to protect the public health and safety with respect to the materials."[16] The purpose of a discontinuance-and-assumption agreement is "to have the material regulated and licensed either by the Commission, or by the State and local governments, but not by both."[17] By contrast, § 2021(c) prohibits the Commission from delegating its authority over "the construction and operation of any production or utilization facility or any uranium enrichment facility," over exports or imports of nuclear materials and facilities, or over the disposal

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[14] *English v. Gen. Elec. Co.*, 496 U.S. 72, 81 (1990).

[15] 42 U.S.C. § 2021(b); *see Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 209 & n.20 (1983) [hereinafter *PG&E*] (discussing subsection (b)).

[16] 42 U.S.C. § 2021(d)(1).

[17] S. Rep. No. 86-870, at 9 (1959); H.R. Rep. No. 86-1125, at 9 (1959) (same).

of such materials.[18] The radiological aspects of those activities remain the exclusive concern of the Commission.

Section 2021(k)—containing the language on which petitioners rely—was a savings clause confirming that States may regulate activities regulated by the Commission as long as such State regulation is not for radiological safety purposes: "Nothing in this section shall be construed to affect the authority of any State or local agency to regulate activities for purposes other than protection against radiation hazards."[19]

The accompanying Senate and House reports explained that § 2021 "does not attempt to regulate materials which the AEC does not now regulate under the Atomic Energy Act of 1954,"[20] such as uranium mining. In hearings conducted by the Joint Committee on Atomic Energy, Robert Lowenstein, from the Commission's Office of General Counsel, told Congress "that the Commission . . . does not regulate mining."[21] Another Commission representative added that "[t]he Commission does not have regulatory jurisdiction over

---

[18] 42 U.S.C. § 2021(c).

[19] *Id.* § 2021(k).

[20] S. Rep. No. 86-870, at 4; *id.* at 10 ("[T]he purpose is clearly limited to the materials already regulated by the Commission under the Atomic Energy Act of 1954; namely, byproduct, source, and special nuclear materials."); H.R. Rep. No. 86-1125, at 4, 10 (same).

[21] *Federal-State Relationships in the Atomic Energy Field: Hearings Before the J. Comm. on Atomic Energy*, 86th Cong. 60 (1959).

such other sources of radiation as X-ray equipment or radium or over the mining of uranium."[22]

Second, the Energy Reorganization Act of 1974 created the Nuclear Regulatory Commission ("NRC"), which "replaced the AEC [Atomic Energy Commission] as the licensing and regulatory authority."[23] (The "AEC and NRC will be referred to as the Commission," unless otherwise noted.[24]) The 1974 Act also transferred the Commission's radiation-standard-setting authority to the Environmental Protection Agency ("EPA"), although enforcement of such standards remains with the NRC.[25]

Third, the Uranium Mill Tailings Radiation Control Act of 1978 closed a gap in the 1954 Act with regard to the regulation and disposal of uranium-mill tailings.[26] Before the 1978 Act, the Commission had concluded that it lacked authority to regulate the radioactive tailings generated when uranium ore is milled.[27]

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[22] *Id.* at 83 (statement of H.L. Price, Dir., Div. of Licensing & Regulation, Atomic Energy Comm'n).

[23] *Duke Power*, 438 U.S. at 63 n.1; *see* Energy Reorganization Act of 1974, Pub. L. No. 93-438, §§ 104, 201, 88 Stat. 1233, 1237, 1242-43 (codified as amended at 42 U.S.C. §§ 5814, 5841).

[24] *Vt. Yankee Nuclear Power Corp. v. Nat. Res. Def. Council, Inc.*, 435 U.S. 519, 525 n.2 (1978).

[25] *See* 42 U.S.C. §§ 5801(c), 5814(c).

[26] Pub. L. No. 95-604, 92 Stat. 3021 (codified as amended at 42 U.S.C. §§ 2022, 7901-7942).

[27] *E.g.*, *Kerr-McGee Chem. Corp. v. NRC*, 903 F.2d 1, 3 (D.C. Cir. 1990) (noting the Commission's view that, before the 1978 Act, uranium tailings "lay outside the AEC's statutory licensing authority and therefore beyond its regulatory reach").

Title I tasked the Department of Energy and the NRC with cleaning up existing or closed uranium-milling sites; Title II required newer sites to be licensed by the NRC or by a State with licensing authority under an agreement with the NRC.[28] The 1978 Act gave EPA the responsibility "for promulgating the general standards that the implementing agencies must meet."[29]

Significantly for this case, nothing in the 1978 Act addressed conventional uranium mining on nonfederal lands. Indeed, to date, Congress has chosen not to empower the Commission to regulate such mining.

B. The Commission and EPA authoritatively construe the Act to exclude conventional uranium mining.

Without express legislative authority to regulate conventional uranium mining on nonfederal lands, the Commission and EPA have consistently interpreted the Act to deny such authority. As noted above, the Commission repeatedly told Congress in 1959 that the Commission does not regulate uranium mining.[30] The Commission took the same position in its 1961 rulemaking that exempted from any licensing requirement the possession, use, or transfer of unrefined uranium

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[28] *See* U.S. Nuclear Regulatory Comm'n, *Backgrounder on Uranium Mill Tailings* (Oct. 2016), https://goo.gl/G7E4k3.

[29] *Am. Mining Cong. v. Thomas*, 772 F.2d 617, 621 (10th Cir. 1985) (citing 42 U.S.C. §§ 2022(a), 7918(a)).

[30] *See supra* notes 21-22; *see also* Pet. App. 70a n.12 (collecting citations).

ore, an exemption that remains codified at 10 C.F.R. § 40.13(b).[31] The Commission reaffirmed that position in a 2006 adjudication.[32] And EPA took the same position in its 1977 rulemaking that established radiation standards for public exposure to the nuclear fuel cycle, standards that remain codified at 40 C.F.R. § 190.02(b).[33]

"[I]n contrast to conventional mining," the NRC *does* assert authority to regulate *in situ* leach mining.[34] "In situ leaching is a process by which chemicals are pumped through drilled wells into uranium deposits, altering the ore and pumping a uranium solution back

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[31] *See* 26 Fed. Reg. 284, 285 (Jan. 14, 1961) (codified as amended at 10 C.F.R. Part 40 (2016)); Notice of Proposed Rulemaking, Source Material, 25 Fed. Reg. 8,619 (Sept. 7, 1960) ("The Act does not . . . require a license for the mining of source material.").

[32] *In re Hydro Res., Inc.*, 63 N.R.C. 510, 512 (2006) ("The NRC does not regulate conventional uranium mining. The Atomic Energy Act requires an NRC license to transfer or receive in interstate commerce any source material (such as uranium ore) only 'after removal from its place of deposit in nature.' This agency has traditionally viewed this provision as precluding jurisdiction over uranium mining as such. In keeping with this interpretation, the NRC begins its oversight at the mill, rather than at the mine.").

[33] 42 Fed. Reg. 2,858, 2,861 (Jan. 13, 1977) (codified at 40 C.F.R. § 190.02(b) (2016)); *see* Proposed Standards, Environmental Radiation Protection for Nuclear Power Operations, 40 Fed. Reg. 23,420 (May 29, 1975) ("[S]ince these standards are proposed under authority derived from the Atomic Energy Act of 1954, as amended, they do not apply to radioactive materials and exposures in the general environment that are the result of effluents from mining operations because that Act does not provide authority over such effluents.").

[34] *In re Hydro Res.*, 63 N.R.C. at 512-13.

to the surface."[35] "[D]uring that procedure, the uranium is 'remov[ed] from its place of deposit in nature' at the time the uranium dissolves into the lixiviant underground and the miner only takes possession of it after it is then pumped to the surface."[36] The NRC regulates *in situ* leach mining because it considers it to be "the first step of processing."[37]

This case involves only conventional uranium mining, however, not *in situ* leach mining. "Because of the geology in the Commonwealth of Virginia, it is very unlikely that [*in situ* recovery] can be used to extract uranium from the Coles Hill deposit or anywhere else in Virginia."[38]

C. Virginia imposes a moratorium on uranium mining in 1982.

In 1982, the Virginia General Assembly enacted legislation governing the exploration for and mining of uranium ore.[39] It allowed uranium-exploration

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[35] Pet. App. 4a n.1.

[36] *Morris v. U.S. N.R.C.*, 598 F.3d 677, 685 n.5 (10th Cir. 2010) (citation omitted); *see also N.M. Mining Comm'n v. United Nuclear Corp.*, 57 P.3d 862, 864 n.2 (N.M. Ct. App. 2002) ("Unlike conventional mining, *in situ* mining combines extraction of the ore with processing; consequently, a license may be required to engage in *in situ* mining.") (citations omitted).

[37] *In re Hydro Res.*, 63 N.R.C. at 512-13.

[38] Pet. App. 23a n.2 (Traxler, J., dissenting) (citation and quotation marks omitted).

[39] 1982 Va. Acts ch. 269 (codified as amended at Va. Code Ann. §§ 45.1-272 to 45.1-285 (2013)).

activities on private lands pursuant to permits issued by the Department of Mines.[40] Petitioner Virginia Uranium received such an exploration permit in 2007 and has used it to gather information about the Coles Hill uranium deposit at issue in this case.[41]

The 1982 legislation required a separate permit to engage in uranium mining but stated, in Code § 45.1-283, that such applications "shall not be accepted by any agency of the Commonwealth prior to July 1, 1983."[42] In 1983, that mining moratorium was extended "until a program for permitting uranium mining is established by statute."[43] The moratorium remains in effect.

D. Virginia enters into a discontinuance-and-assumption agreement with the NRC in 2009.

In 2009, the NRC entered into a § 2021 agreement with Virginia under which the Commonwealth assumed the authority to regulate the radiological hazards of "source material" and most byproduct material.[44] The agreement excluded the regulation of tailings.[45] Article VIII of the agreement empowered the Commission to

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[40] *Id.* § 45.1-274.

[41] Pet. App. 222a (Compl. ¶ 75).

[42] 1982 Va. Acts ch. 269, § 45.1-283.

[43] 1983 Va. Acts ch. 3, § 45.1-283.

[44] 74 Fed. Reg. 14,821, 14,822 (Apr. 1, 2009) (Art. I).

[45] 74 Fed. Reg. at 14,823 (Art. II(6)) (reserving Commission authority over byproduct material defined in § 11(e)(2) of the Atomic Energy Act, 42 U.S.C. § 2014(e)(2)).

revoke the delegation if Virginia "has not complied with one or more of the requirements of [§ 2021]."[46] That agreement has not been revoked and remains in effect.

E. After unsuccessfully lobbying the Virginia legislature, petitioners claim in 2015 that the uranium-mining moratorium is preempted.

Petitioners own and seek to mine land in Chatham, Virginia that they contend contains a deposit of 119 million pounds of uranium ore (the "Coles Hill deposit").[47] "For a period of almost twenty years after 1986, [petitioners'] plans to develop the Coles Hill deposit were not pursued because uranium prices had fallen steeply."[48] After the price of uranium rebounded, however, "Virginia Uranium . . . began to engage the political process, urging lawmakers to reconsider the ban on uranium mining."[49]

When their lobbying efforts failed, petitioners filed suit in the United States District Court for the Western District of Virginia, seeking a declaratory judgment that the Atomic Energy Act preempts Virginia Code § 45.1-283; they sought an injunction compelling Virginia's permitting authorities "to ignore" the

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[46] *Id.* (Art. VIII).

[47] Pet. App. 201a (Compl. ¶¶ 24-25).

[48] Pls.-Appellants' Opening Br. 12, *Va. Uranium, Inc. v. Warren*, No. 16-1005 (4th Cir. Mar. 17, 2016), ECF No. 19.

[49] *Id.* at 13.

mining moratorium.[50] Petitioners alleged that (1) "Virginia's ban on uranium mining was from the outset grounded in . . . radiological safety concerns"; and (2) "in the decades since, Virginia has extended and then repeatedly refused to lift its ban, actions that were motivated by those same . . . radiological safety concerns."[51]

F. The district court dismisses the complaint for failure to state a claim, and the Fourth Circuit affirms.

Defendants moved to dismiss under Federal Rule 12(b)(6) for failure to state a claim, arguing that, even assuming the mining ban was based on radiological safety concerns, it was not preempted. The district court agreed and dismissed the complaint with prejudice.

Noting the presumption against preemption,[52] the district court found that "[t]he AEA confers no federal regulatory or licensing authority over nonfederal uranium deposits or their conventional mining. It has never done so."[53] The district court rejected petitioners' argument that § 2021(k), added by the 1959 amendment, showed that Congress intended to occupy the field of radiological safety concerns with regard to

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[50] Pet. App. 193a (Compl. intro.).

[51] Pet. App. 194a (Compl. ¶ 3).

[52] Pet. App. 61a-62a.

[53] Pet. App. 66a.

uranium mining.[54] The court explained that § 2021 permitted the Commission to enter into discontinuance-and-assumption agreements with States only with respect to certain specific aspects of the Commission's regulatory authority, but the Commission's regulatory authority has never encompassed conventional uranium mining on nonfederal lands.[55] Citing the 1959 hearings, the district court found that, when § 2021 was enacted, "Congress was aware that the AEA did not regulate nonfederal uranium deposits or their conventional mining."[56] The court concluded that "Congress did not intend [§ 2021] to broaden the preemptive field respecting source materials so as to include materials outside of the NRC's regulatory authority."[57]

The district court distinguished the cases cited by petitioners in support of their field-preemption claim, particularly this Court's 1983 decision in *PG&E*. The court explained that those cases involved fields plainly within the Commission's regulatory authority, such as "the construction or operation of nuclear-power facilities," not conventional mining of "source materials" over which the Commission has no authority.[58] The district court likewise found no conflict to support petitioners' conflict-preemption claim. The court noted that, "[s]hould the NRC wish that a nonfederal

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[54] Pet. App. 68a-72a.

[55] Pet. App. 69a-70a & n.11.

[56] Pet. App. 70a-71a & n.12.

[57] Pet. App. 71a-72a.

[58] Pet. App. 72a-73a.

uranium deposit be conventionally mined, it has unobstructed means for seeing that it occur," citing § 2096, which authorizes the Commission to purchase or condemn any land containing necessary source materials.[59]

The Fourth Circuit affirmed in a 2-1 decision. Writing for the court, Judge Diaz rejected petitioners' broad argument that conventional uranium mining was an "activity" regulated by the Commission under § 2021(k) that States could regulate only for non-radiological safety purposes.[60] The court said that the Commission had reasonably interpreted the Act to preclude the regulation of conventional uranium mining.[61] Indeed, the court noted that if States could not regulate uranium mining for radiological safety purposes, then neither a State nor the NRC could exercise such regulatory control and companies "could mine free of [any] government oversight."[62]

The court of appeals next considered and rejected petitioners' fallback argument: that even if States may regulate the radiological safety aspects of conventional uranium mining, they may not do so if the driving consideration is concern over uranium milling and tailings activities.[63] The court noted that the moratorium on uranium mining "does not mention uranium milling

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[59] Pet. App. 81a & n.20.

[60] Pet. App. 8a-11a.

[61] Pet. App. 11a-12a.

[62] Pet. App. 13a.

[63] Pet. App. 14a.

or tailings storage."[64] Petitioners' argument that the ban "has the effect of prohibiting those activities" was premised on the assumption that banning uranium mining would reduce the demand for milling and tailings activities. As petitioners put it, "no one 'would want to undertake the pointless expense of constructing a mill and tailings management complex in Virginia and transporting out-of-state uranium [ore] into the Commonwealth.'"[65] But the court declined petitioners' invitation to parse the legislature's radiological safety justification for the mining ban that closely. The court distinguished the cases on which petitioners relied as involving direct restrictions on NRC-regulated activities.[66]

Finally, the court of appeals rejected petitioners' conflict-preemption argument. The court concluded that "Congress's purposes and objectives in passing the Act are not materially affected by the Commonwealth's ban on conventional uranium mining."[67]

Judge Traxler dissented.[68] He reasoned that Virginia had to concede for purposes of its Rule 12(b)(6) motion that the uranium ban was motivated by radiological safety considerations that were principally based on concerns about milling and tailings activities,

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[64] *Id.*

[65] Pet. App. 13a-14a (quoting petitioners' reply brief).

[66] Pet. App. 14a-18a.

[67] Pet. App. 19a.

[68] Pet. App. 20a.

activities that Virginia could not regulate.[69] He concluded that "any state statute grounded in protecting citizens from the radiological dangers of activities regulated by the Act is preempted, regardless of the statute's effect."[70] Judge Traxler also would have invalidated Virginia's uranium-mining moratorium based on conflict preemption. He reasoned that the moratorium frustrates the purpose of the Atomic Energy Act "to *maximize* our country's ability to develop nuclear power."[71]

Petitioners filed a timely petition for a writ of certiorari.

REASONS FOR DENYING THE PETITION

Although they disputed it below, petitioners now concede that nothing in the Atomic Energy Act of 1954 regulates the conventional mining of uranium on nonfederal lands. That concession is dispositive because it means, as far as field preemption is concerned, that States can regulate or prohibit such mining for *any* reason, including radiological safety concerns. Conventional uranium mining on nonfederal lands is simply not within the preempted field.

Certiorari is unwarranted because the court of appeals' decision upholding Virginia's authority over

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[69] Pet. App. 40a-41a.

[70] Pet. App. 40a n.12.

[71] Pet. App. 52a.

such mining does not conflict with the decisions of this Court or of other circuits that have addressed field preemption under the Atomic Energy Act. And although petitioners also appear to have abandoned the conflict-preemption argument they advanced below, Virginia's uranium-mining moratorium likewise does not conflict with the Act because the Act does not require States to permit the mining of uranium ore in the first place.

I. The decision below does not conflict with this Court's decisions or with those of the Second and Tenth Circuits.

A. The Atomic Energy Act preempts a State law only if the State regulates an NRC-regulated activity based on radiological safety concerns or has a direct and substantial effect on NRC licensees.

Petitioners bear the burden of proving preemption,[72] and the presumption against preemption is a "considerable burden" to overcome.[73] This Court applied the presumption against preemption in *PG&E*

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[72] *Wyeth v. Levine*, 555 U.S. 555, 569 (2009) (stating that the challenger bears the "burden in establishing a pre-emption defense"); *Pharm. Research & Mfrs. of Am. v. Walsh*, 538 U.S. 644, 661-62 (2003) (plurality opinion) ("We start . . . with a presumption that the state statute is valid, and ask whether petitioner has shouldered the burden of overcoming that presumption.") (citation omitted); *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 255 (1984) (imposing burden on challenger to prove preemption under the Atomic Energy Act).

[73] *De Buono v. NYSA-ILA Med. & Clinical Servs. Fund*, 520 U.S. 806, 814 (1997) (citation omitted).

and *English*, finding that the State law in question was not preempted by the Atomic Energy Act.[74] The Court " 'start[s] with the assumption that the historic police powers of the States were not to be superseded by the Federal Act unless that was the clear and manifest purpose of Congress.' "[75] The presumption against pre-emption applies not only to the "question *whether* Congress intended any pre-emption at all," but also "to questions concerning the *scope* of its intended invalidation of state law."[76]

It bears mention at the outset that while "the purpose of Congress is the ultimate touchstone in every pre-emption case,"[77] this Court has "never meant that to signify congressional intent in a vacuum, unrelated to the giving of meaning to an enacted statutory text."[78] "There is no federal pre-emption *in vacuo*, without a constitutional text or a federal statute to assert it."[79] There is no such text here.

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[74] *See English*, 496 U.S. at 79, 83; *PG&E*, 461 U.S. at 203, 206; *id.* at 225 (Blackmun, J., concurring in part and concurring in the judgment).

[75] *Wyeth*, 555 U.S. at 565 (quoting *Medtronic, Inc. v. Lohr*, 518 U.S. 470, 485 (1996)).

[76] *Medtronic*, 518 U.S. at 485 (first emphasis added).

[77] *Wyeth*, 555 U.S. at 565 (quoting *Medtronic*, 518 U.S. at 485).

[78] *P.R. Dep't of Consumer Affairs v. Isla Petroleum Corp.*, 485 U.S. 495, 501 (1988).

[79] *Id.* at 503.

Indeed, the Atomic Energy Act does not contain an express preemption provision applicable to this case,[80] and petitioners have never claimed that the Act expressly preempts Virginia's uranium-mining moratorium. The statutory text on which they rely is actually the savings clause in § 2021(k). That savings clause makes clear that "[n]othing in this section [2021] shall be construed to affect the authority of any State or local agency to regulate activities for purposes other than protection against radiation hazards."[81]

As noted above, § 2021 was added in 1959 to allow the Commission to delegate some of its regulatory authority to the States. As *PG&E* put it, "the point of the 1959 Amendments was to *heighten* the States' role."[82]

Thus, a State can enter into a discontinuance-and-assumption agreement with the NRC under § 2021(b) that empowers the State to regulate NRC licensees with regard to the radiological hazards posed by by-product materials, source materials, or special nuclear materials. Even if a State does not do so, however, § 2021(k) allows that State to regulate such activities for purposes *other* than controlling radiation hazards. And for those activities specified in subsection (c), the regulation of which the NRC is forbidden to delegate to States—the construction and operation of nuclear

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[80] *See, e.g.*, *PG&E*, 461 U.S. at 205 (finding no express preemption provision requiring States to permit the construction of nuclear power plants); *English*, 496 U.S. at 80 (finding no express preemption provision barring State intentional-infliction-of-emotional-distress claims).

[81] 42 U.S.C. § 2021(k).

[82] 461 U.S. at 209 (emphasis added).

facilities, the export or import of nuclear materials, and the disposal of nuclear waste—States likewise may regulate those activities for purposes other than controlling radiation hazards.[83]

Petitioners have rightly abandoned their aggressive claim in the lower courts that the term "activities" in § 2021(k) should be read to mean *any* activities of the States, rather than activities of NRC licensees. Under that theory, the States would be prohibited from regulating *anything* for the purpose of protecting against radiation hazards. That interpretation was plainly untenable because there are numerous activities involving radiation hazards that have always been outside the Commission's bailiwick. Virginia, for example, regulates and licenses radioactive materials and devices using such materials that are "not under the authority of the" Commission,[84] including x-ray equipment,[85] radon-screening companies,[86] radiopharmaceuticals,[87] and radiological weapons.[88] Conventional uranium mining on nonfederal lands, like those other

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[83] *See, e.g.*, *id.* at 205 ("Congress, in passing the 1954 Act and in subsequently amending it, intended that the Federal Government should regulate the radiological safety aspects involved in the construction and operation of a nuclear plant, but that the States retain their traditional responsibility in the field of regulating electrical utilities for determining questions of need, reliability, cost, and other related state concerns.").

[84] Va. Code Ann. § 32.1-229.3 (2015).

[85] Va. Code Ann. § 32.1-229.1 (Supp. 2016).

[86] Va. Code Ann. § 32.1-229.01 (2015).

[87] Va. Code Ann. § 54.1-3410.1 (2013).

[88] Va. Code Ann. § 18.2-52.1 (2014).

fields, has always remained outside of the Commission's regulatory authority.

The Fourth Circuit was thus plainly correct that, if States could not regulate the radiological hazards of conventional uranium mining, then "entities could mine free of government oversight" altogether.[89] That could not have been Congress's intent. "It is almost inconceivable that Congress would have left a regulatory vacuum; the only reasonable inference is that Congress intended the States to continue to make these judgments."[90] And even if the term "activities" in § 2021(k) were "susceptible of more than one plausible reading, courts ordinarily 'accept the reading that disfavors pre-emption.'"[91] "That approach is 'consistent with both federalism concerns and the historic primacy of state regulation of matters of health and safety.'"[92]

This Court's three decisions restricting the preemptive sweep of the Atomic Energy Act—*PG&E*, *Silkwood*, and *English*—confirm that the preemptive focus of the Act is fixed on NRC-regulated activities and NRC licensees.

PG&E upheld a California law that imposed a moratorium on the certification of new nuclear reactors until the State energy commission certified the

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[89] Pet. App. 13a.

[90] *PG&E*, 461 U.S. at 207-08.

[91] *CTS Corp. v. Waldburger*, 134 S. Ct. 2175, 2188 (2014) (quoting *Altria Grp., Inc. v. Good*, 555 U.S. 70, 77 (2008)).

[92] *Id.* (quoting *Medtronic*, 518 U.S. at 485).

existence of adequate nuclear-waste facilities.[93] The moratorium addressed matters that § 2021(c) prohibited the NRC from assigning to States: "the construction and operation" of nuclear facilities and the "disposal" of nuclear waste.[94] PG&E, an NRC licensee, claimed that the moratorium was preempted by the Atomic Energy Act.[95] Applying the savings clause in § 2021(k), however, the Court held that the moratorium was not preempted because the purpose was grounded in economic concerns about the lack of available waste disposal, not safety concerns about "radiation hazards."[96]

Silkwood held that the Atomic Energy Act did not preempt the recovery of punitive damages under State tort law for radiation damage caused by the release of plutonium from a nuclear facility.[97] Even though § 2021(c) vests in the Commission the "exclusive regulatory authority over 'the disposal of such'" material,[98] the Supreme Court found evidence in the Price-Anderson Act that Congress assumed the existence of—and therefore did not intend to preempt—State tort-law remedies for the improper handling of nuclear material regulated by the Commission.[99] The Court recognized that "there is tension between the conclusion

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[93] 461 U.S. at 203.

[94] *Id.* at 198, 209 (quoting 42 U.S.C. §§ 2021(c)(1), (c)(4)).

[95] *Id.* at 198.

[96] *Id.* at 212-15.

[97] 464 U.S. at 258.

[98] *Id.* at 250 (quoting 42 U.S.C. § 2021(c)(4)).

[99] *Id.* at 251-56.

that safety regulation is the exclusive concern of the federal law and the conclusion that a State may nevertheless award damages based on its own law of liability."[100] But "Congress intended to stand by both concepts and to tolerate whatever tension there was between them."[101]

Finally, the Court held in *English* that the Atomic Energy Act did not preempt a common law intentional-infliction-of-emotional-distress claim brought by an employee of a nuclear-fuels production facility who claimed that she was fired "in retaliation for [her] nuclear-safety complaints."[102] The Court noted that, under *PG&E* and § 2021(k), the preempted field is defined, "in part, by reference to the motivation behind the state law."[103] It is also defined, in part, "by the state law's actual effect on nuclear safety."[104] Because the intentional-infliction-of-emotional-distress claim was "not motivated by [nuclear] safety concerns," that part of the field preemption inquiry was "not relevant."[105] On the effects prong, a State-law tort claim might be "so related to the 'radiological safety aspects involved in the . . . operation of a nuclear [facility],' that it falls within the pre-empted field."[106] But numerous State laws could "tangentially" affect nuclear

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[100] *Id.* at 256.

[101] *Id.*

[102] 496 U.S. at 74, 85.

[103] *Id.* at 84.

[104] *Id.*

[105] *Id.*

[106] *Id.* at 85 (alteration in original) (citation omitted).

safety decisions without being preempted, such as State minimum-wage laws.[107]

The Court held that, "[f]or a state law to fall within the pre-empted zone, it must have some *direct and substantial* effect on the decisions made by those who build or operate nuclear facilities concerning radiological safety levels."[108] The Court concluded that, while imposing liability on NRC licensees for retaliatory employment practices could cause them to "alter[] their radiological safety policies," the effect was "neither direct nor substantial enough to place [the] claim in the pre-empted field."[109]

B. Virginia's uranium-mining moratorium does not regulate an NRC-regulated activity and has no direct and substantial effect on NRC licensees.

PG&E, *Silkwood*, and *English* provide no support for petitioners' field-preemption claim because the State law in question here neither regulates the activities of an NRC licensee nor has a direct and substantial effect on the decisions by any such licensee concerning radiation hazards. Each of those cases involved nuclear facilities regulated by the NRC. Indeed, each involved the regulation of an activity listed under § 2021(c) that the NRC is barred from delegating to the States. By contrast, as the district court correctly

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[107] *Id.*

[108] *Id.* (emphasis added).

[109] *Id.*

ruled, the Atomic Energy Act "confers no federal regulatory or licensing authority over nonfederal uranium deposits or their conventional mining. It has never done so."[110] So even assuming for purposes of a Rule 12(b)(6) motion that Virginia's uranium-mining moratorium was based on radiological safety concerns, nothing in the Atomic Energy Act barred Virginia from relying on such concerns to prohibit mining.

Nor does Virginia's uranium-mining moratorium have, in the words of *English*, "a direct and substantial effect on the decisions made by those who build or operate nuclear facilities concerning radiological safety levels."[111] To be sure, "uranium milling and tailings storage are 'activities' under Section 2021(k) because they are regulated by the NRC, and [S]tates may therefore not regulate them except for purposes other than protection against radiation hazards."[112] But Virginia has not prohibited or otherwise regulated milling facilities or tailings storage.

Although petitioners posit that Virginia's moratorium on uranium mining reduces the demand for uranium milling and tailings management by reducing the supply of native ore for processing,[113] that alleged supply-and-demand response is, at best, indirect. Under *Silkwood* and *English*, that indirect effect is not enough to bring the regulation of uranium mining into

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[110] Pet. App. 66a. *See supra* at 4-9.

[111] 496 U.S. at 85.

[112] Pet. App. 13a-14a.

[113] Pet. 29.

the preempted field. Indeed, if the imposition of a $10 million punitive award for radiation-safety violations did not have a direct and substantial effect on the NRC licensee in *Silkwood*,[114] then Virginia's uranium-mining moratorium has no such direct and substantial effect on any such licensee either.

C. There is no circuit split because *Skull Valley* and *Entergy* involved State laws that, unlike this case, foreclosed NRC-regulated activities and had a direct and substantial effect on NRC licensees.

Petitioners are wrong that the decision below conflicts with decisions of the Tenth Circuit in *Skull Valley*[115] and the Second Circuit in *Entergy*.[116] Those cases are distinguishable because they involved a State's direct regulation of an NRC-licensed activity based on radiation concerns, something absent in this case.

The Tenth Circuit in *Skull Valley* held that a suite of laws enacted by the State of Utah between 1998 and 2001 were preempted by the Atomic Energy Act because, out of radiological safety concerns, Utah sought

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[114] *See English*, 496 U.S. at 85-86 (explaining that allowing State-law claims by whistleblowers would have less effect on NRC licensees than *Silkwood*'s permitting punitive damage claims by persons injured by radiation caused by safety violations).

[115] *Skull Valley Band of Goshute Indians v. Nielson*, 376 F.3d 1223 (10th Cir. 2004), *cert. denied sub nom. Nielson v. Private Fuel Storage, LLC*, 546 U.S. 1060 (2005).

[116] *Entergy Nuclear Vt. Yankee, LLC v. Shumlin*, 733 F.3d 393 (2d Cir. 2013).

to systematically block the plaintiff, an NRC licensee, from storing spent nuclear fuel ("SNF") in an NRC-licensed facility on the Skull Valley Indian reservation. The preempted laws consisted of:

> (1) amendments to Utah's Radiation Control Act, which establish state licensing requirements for the storage of SNF, and which revoke statutory and common law grants of limited liability to stockholders in companies engaged in storing SNF; (2) "the County Planning Provisions," which require county governments to impose regulations and restrictions on SNF storage; [and] (3) "the Road Provisions," which vest the Governor and the state legislature with authority to regulate road construction surrounding the proposed SNF storage site on the Skull Valley reservation.[117]

Because § 2021(c) prohibits the NRC from delegating to States the regulation of the radiological aspects of SNF storage, Utah could regulate that NRC-regulated activity, under § 2021(k), only "for purposes other than protection against radiation hazards."[118] The Tenth Circuit found that the Utah laws were preempted because they regulated SNF storage specifically because of its radiation hazards.[119]

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[117] 376 F.3d at 1228 (citations omitted). A fourth set of laws, the "Miscellaneous Provisions," were challenged on grounds other than preemption. *Id.*

[118] 42 U.S.C. § 2021(k).

[119] 376 F.3d at 1245-53.

Petitioners attempt to fit this case into the facts of *Skull Valley* by singling out the Road Provisions at issue there and arguing that those provisions did not specifically mention SNF storage. That is not entirely accurate. One provision required approval of both the Governor and the Legislature if the operator of an SNF facility sought to challenge the State transportation agency's decision to deny a permit for the disposal of "high level radioactive waste."[120] While it is true that other road provisions did not mention SNF activities by name, they targeted the specific roads leading to the SNF facility and prevented their use without State approval.[121] Indeed, the sponsor testified that those provisions "established a 'moat' around the proposed SNF site, and the Governor added that the Road Provisions 'will add substantially to our ability as a state to protect the health and safety of our citizens against the storage of high-level nuclear waste.'"[122]

Moreover, the Road Provisions on which petitioners here rely were part of an integrated package of

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[120] *See* Utah Code Ann. § 54-4-15(4)(b) (referencing petition filed under § 19-3-318); *Skull Valley*, 376 F.3d at 1230 ("Although the discretion to grant petitions for railroad crossings is generally vested in the State Department of Transportation, the Utah legislature added a provision in 1999 that states that the resolution of any dispute regarding a petition filed by an entity engaged in SNF storage and transportation 'requires the concurrence of the governor and the legislature in order to take effect.'" (citing Utah Code § 54-4-15(4)(b)).

[121] 376 F.3d at 1252.

[122] *Id.*

laws specifically targeting and blocking the SNF facility itself. As the United States pointed out when recommending that this Court deny certiorari in *Skull Valley*, "the *entirety* of the series of interrelated laws at issue . . . were targeted specifically to regulate the safety aspects of the proposed waste facility and were designed to halt the construction and operation of the proposed facility based on radiation hazard concerns."[123] That package included laws, for example, imposing a $5 million licensing fee on the NRC licensee, requiring a minimum $2 billion bond, and eliminating limited-liability protection for investors—measures designed to block the facility.[124]

This case is nothing like *Skull Valley*. The restrictions there had a "direct and substantial effect on the decisions" of an NRC licensee regarding the "radiological safety levels of SNF in Utah."[125] In this case, by contrast, uranium mining is not an NRC-licensed activity. Nothing in Virginia's uranium-mining moratorium restricts or prohibits any milling or tailings activities from taking place in Virginia. And the mining

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[123] Br. for the United States as Amicus Curiae 10-11, *Nielson v. Private Fuel Storage, LLC*, 546 U.S. 1060 (2005) (No. 04-575) (emphasis added); *id.* at 13-14 ("Utah's comprehensive licensing scheme *as a whole* was targeted at the preempted field of nuclear safety and attempts to regulate within the NRC's exclusive jurisdiction. . . . Utah's statutes exclusively target a proposed nuclear waste storage facility. . . . ") (citation and quotation omitted).

[124] *Id.* at 4.

[125] *Id.* at 14 (quoting *English*, 496 U.S. at 85).

moratorium does not have a direct and substantial effect on any NRC licensee regarding radiological safety decisions.

Entergy is likewise distinguishable. The Second Circuit affirmed the lower court's decision that the Atomic Energy Act preempted two Vermont laws that shut down the Vermont Yankee nuclear plant by enabling the Vermont legislature to withhold permission for its continued operation. The court of appeals upheld the district court's finding that the Vermont "legislature's primary purpose" was based on radiological safety concerns regarding the operation of the plant and the disposal of nuclear waste.[126] *Entergy* is a straightforward application of *PG&E*, except that Vermont, unlike California, lacked a non-radiological safety justification for blocking the nuclear plant. In this case, by contrast, conventional uranium mining is not regulated by the Atomic Energy Act, and Virginia's mining moratorium has no direct and substantial effect on any NRC licensee. So unlike in *Entergy*, it is irrelevant here whether Virginia had a non-radiological safety justification under § 2021(k) for imposing the moratorium on uranium mining.

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[126] *Entergy*, 733 F.3d at 420; *id.* at 421 ("impermissible primary purpose"); *id.* at 424 ("impermissible concerns about the radiological safety of spent nuclear fuel storage").

II. Virginia's moratorium on uranium mining does not conflict with the Atomic Energy Act and poses no threat to national security.

The Fourth Circuit rejected petitioners' alternative argument—that Virginia's uranium-mining moratorium is preempted on the theory that it conflicts with the policy of the Atomic Energy Act to promote the development of nuclear energy.[127] Although the conflict-preemption issue falls within the scope of the question presented, petitioners conspicuously fail to raise or develop it as a reason for granting certiorari.

That omission is understandable because this Court rejected the same type of conflict-preemption claim in *PG&E* and *Silkwood*. In *PG&E*, the Court said "[t]here is little doubt that a primary purpose of the Atomic Energy Act was, and continues to be, the promotion of nuclear power."[128] But the Court cautioned that Congress did not seek to promote nuclear power "at all costs."[129] Even for an activity squarely within the Commission's exclusive regulatory authority—the construction of a nuclear power plant—"Congress has left sufficient authority in the States to allow the development of nuclear power to be slowed or even stopped for economic reasons."[130] Likewise in *Silkwood*, the Court found no conflict preemption in the imposition of a $10 million punitive damage

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[127] Pet. App. 18a-19a.

[128] 461 U.S. at 221.

[129] *Id.*

[130] *Id.* at 223.

award under State law for the violation of nuclear safety standards. The Court reasoned that Congress did not clearly displace State common-law tort remedies. So while the Court acknowledged the "tension between the conclusion that safety regulation is the exclusive concern of the federal law and the conclusion that a State may nevertheless award damages based on its own law of liability," that "regulatory consequence was something that Congress was quite willing to accept."[131]

The conflict-preemption argument fails here for the same reason. Congress has consistently chosen *not* to regulate conventional uranium mining on non-federal lands, leaving the regulation of that field entirely to the States. Congress believed from the outset that sufficient uranium ore could be purchased on the open market and that, if not, the Commission could condemn and pay just compensation for "any uranium supplies which it is unable to buy in the open market."[132] Even when Congress amended the Atomic Energy Act in 1978 to empower the Commission to regulate uranium milling and tailings disposal, it did not give the Commission authority to regulate conventional uranium mining.[133]

Because the Act leaves the regulation of conventional uranium mining to States, a State's decision *not*

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[131] 464 U.S. at 256.

[132] 92 Cong. Rec. 6,073, 6,082 (June 1, 1946); *see also supra* note 7.

[133] *See supra* notes 26-29 and accompanying text.

to allow such mining poses no obstacle to achieving the Act's purpose. As in *PG&E* and *Silkwood*, if there is any tension between allowing States to ban conventional uranium mining and the promotion of nuclear power, it is a tension that Congress was willing to tolerate. There is thus no merit to petitioners' claim that the Fourth Circuit's decision might jeopardize national security by reducing the supply of domestic uranium ore; Congress empowered the Commission to deal with that situation if it ever arises.

Petitioners' claim that the Fourth Circuit's decision poses a threat to domestic uranium markets is also based on factual distortions and omissions. Although domestic uranium production is nearing a historic low, it is not because the United States has failed to adequately develop its uranium resources. Rather, domestic uranium production has decreased in response to "persistent oversupply that has driven market prices below production costs."[134] Domestic uranium producers complain that they have been "struggling to survive" the glutted market, a glut that has forced them to cut production, cancel exploration projects, and reduce their workforces by more than half since 2012.[135]

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[134] Uranium Producers of Am., Comment Letter on Excess Uranium Management: Effects of Potential DOE Transfers of Excess Uranium on Domestic Uranium Mining, Conversion, and Enrichment Industries, Notice of Issues for Public Comment, 16 (Mar. 9, 2017), https://goo.gl/YkV1uK.

[135] *Id.* at 1, 3-4.

The domestic uranium market is glutted in part because the Department of Energy manages a stockpile of the equivalent of about 100,000 metric tons of natural uranium that is suitable for atomic energy generation.[136] The Department's 2013 Excess Management Plan projected that final disposition of that inventory "could take at least 20 years."[137] Domestic uranium producers complain that the Department "is now the largest uranium supplier in the U.S., with annual transfers that are nearly two times what the entire domestic industry produces."[138] In light of the oversupply problem, federal law restricts the Secretary of Energy from selling excess uranium inventory from the national stockpile unless he first determines that "sales will not have a substantial adverse impact on the domestic uranium mining industry."[139] Petitioners do not mention the stockpile and are conspicuously silent about those oversupply problems.

Petitioners also try to stoke unwarranted fears about overdependence on Russian uranium without mentioning that the United States intentionally favored Russian imports for twenty years as a matter of nonproliferation policy. The Russia Highly Enriched Uranium ("HEU") Agreement of 1993 obligated the United States to purchase 500 tons of Russian uranium as an incentive for Russia to significantly reduce

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[136] 82 Fed. Reg. 21,594, 21,597 (May 9, 2017) (Table 1).

[137] U.S. Dep't of Energy, *Excess Uranium Inventory Management Plan*, 3 (2013), https://goo.gl/WEQTn9.

[138] UPA Letter, *supra* note 134, at 17.

[139] 42 U.S.C. § 2296b-2.

its nuclear arsenal.[140] The HEU Agreement converted uranium that was "enough for approximately 20,000 Russian nuclear warheads"[141] into American civilian use, providing enough fuel to supply 10% of all electricity consumed in the United States for two decades.[142]

Indeed, it was the importance of preserving the effectiveness of the Russian HEU Agreement—by preventing the circumvention of anti-dumping laws—that led the Government to urge review in *United States v. Eurodif, S.A.*[143] Petitioners take the Government's petition for writ of certiorari in that case out of context. They misstate (at 7) that the Government argued for protecting "the domestic supply of uranium," which is simply not what the Government claimed.[144]

Petitioners also exaggerate the amount of uranium imported from Russia relative to other sources. Last year, for instance, uranium sourced from the

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[140] *See* Agreement Concerning the Disposition of Highly Enriched Uranium Extracted From Nuclear Weapons, U.S.-Russ., Feb. 18, 1993, 1993 WL 152921; 82 Fed. Reg. 21,598.

[141] Pet. App. 343a.

[142] Geoff Brumfiel, *Megatons To Megawatts: Russian Warheads Fuel U.S. Power Plants*, NPR (Dec. 11, 2013), https://goo.gl/wbcA99.

[143] *See* Pet. for Writ of Cert., *United States v. Eurodif, S.A.*, 555 U.S. 305 (2009) (No. 07-1059) (Pet. App. 343a).

[144] The actual quotation from the Government's petition in *Eurodif* reads: "the court of appeals' decision threatens the ongoing economic viability of USEC, the only domestic entity that *enriches* uranium. . . . *Its* continued survival is, accordingly, a matter of compelling importance to U.S. national security interests." Pet. App. 347a (emphasis added).

United States, Australia, and Canada accounted for 51% of the uranium used for domestic energy production; uranium from Russia, Kazakhstan, and Uzbekistan accounted for only 38%.[145]

Finally, petitioners misstate the effect of the Fourth Circuit's ruling on the ability of States to ban all uranium mining. As the court of appeals pointed out, "as of 2015, eighteen domestic uranium recovery facilities—those that either use *in situ* leaching or are located on federal lands—are licensed by the NRC and thus beyond the reach of any state bans."[146] Indeed, the *in situ* method is far more prevalent nationwide,[147] even though it is unsuitable in Virginia.[148] Thus, the Fourth Circuit was correct that, even if every State in the country were to ban conventional uranium mining on nonfederal lands, it "would have little effect"[149] on the domestic uranium market.

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[145] U.S. Dep't of Energy, Energy Info. Admin., *2016 Uranium Marketing Annual Report*, 1 (June 2017), https://goo.gl/1JmnH7.

[146] Pet. App. 19a.

[147] U.S. Dep't of Energy, Energy Info. Admin., *2016 Domestic Uranium Production Report*, 5 (Table 2) (May 2017), https://goo.gl/dTSxAA.

[148] Pet. App. 23a n.2 (Traxler, J., dissenting).

[149] Pet. App. 19a.

CONCLUSION

The petition for a writ of certiorari should be denied.

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RECORD AND BRIEFS

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Supreme Court of the United States

VIRGINIA URANIUM, INC., *et al.*,

Petitioners,

v.

JOHN WARREN, *et al.*,

Respondents.

On Petition for Writ of Certiorari to the United States Court of Appeals for the Fourth Circuit

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CORPORATE DISCLOSURE STATEMENT

The disclosure statement in the petition for writ of certiorari remains accurate.

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STATUTORY AND REGULATORY PROVISIONS

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ARGUMENT

Respondents rest their opposition on a single supposedly "dispositive" proposition: because the Nuclear Regulatory Commission ("NRC") does not regulate uranium mining, they say, "nothing in the [Atomic Energy] Act [("AEA" or "Act")] prevents States from regulating or banning such mining, *regardless* of the State's alleged purpose." Opp.1. Respondents concede that the purpose of the Commonwealth's ban on mining uranium ore was not to ban the *mining* itself, but to ban the next steps in the uranium production process: milling the ore and storing the resulting radioactive tailings. The Commonwealth sought to ensure "the radiological safety of uranium ore milling and tailings storage" by preventing those activities from ever occurring in the first place. Pet.App.40a-41a (Traxler, J., dissenting). The Commonwealth also admits that it was prohibited, under Section 2021(k) of the Act, from enacting a law explicitly banning uranium milling and tailings storage for radiological safety purposes because these "activities" are regulated exclusively by the NRC, and "[S]tates may therefore not regulate them except for purposes other than protection against radiation hazards." Opp.26 (brackets in original). These concessions have boxed Respondents into the untenable position of having to argue that the Commonwealth is free to ban uranium milling and tailings storage for radiological safety purposes by simply banning the antecedent mining of uranium ore.

Respondents prevailed in the court of appeals, but on a theory that they did not advance below and that they decline to defend in this Court. The panel majority held that "a pretext analysis to ascertain [the] legislature's true motive" was inappropriate

here, because the case did not involve invidious discrimination "under the Equal Protection Clause." Pet.App.15a. A "pretext analysis," of course, requires little analysis when the pretext is *admitted*. In any event, neither the Fourth Circuit's theory nor Respondents' theory for ignoring the true purpose of the ban can be squared with this Court's repeated holdings that the federal government has "occupied the entire field of nuclear safety concerns," *Pacific Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 212 (1983) ("*PG&E*"), and the bounds of the "preempted field" are defined, "in part, by reference to the motivation behind [a challenged] state law," *English v. General Elec. Co.*, 496 U.S. 72, 84 (1990) (citing *PG&E*, 461 U.S. at 213).

The Fourth Circuit's conclusion also conflicts squarely with the holdings of the Tenth and Second Circuits that this Court's cases require an inquiry into "the purpose and effect of the state law at issue, and, as a result, a state cannot use its authority [over otherwise state and local] matters as a means of regulating radiological hazards." *Skull Valley Band of Goshute Indians v. Nielson*, 376 F.3d 1223, 1248 (10th Cir. 2004); *see also Entergy Nuclear Vermont Yankee, LLC v. Shumlin*, 733 F.3d 393, 416 (2d Cir. 2013). Simply stated, under the view adopted by the Tenth and Second Circuits, the Commonwealth may not use its authority to regulate uranium mining as a pretext for prohibiting uranium milling and tailings management activities based on concerns about radiological safety. "[A]ny state statute grounded in protecting citizens from the radiological dangers of activities regulated by the Act is preempted, regardless of the statute's effect," Pet.App.40a n.12 (Traxler, J., dissenting), and regardless of whether the

statute purports to regulate an activity that is otherwise subject to plenary state power.

Respondents' attempt to distinguish *Skull Valley* only confirms the conflict. They point out that Utah sought to "systematically block" the plaintiff in that case from storing spent nuclear fuel ("SNF") in Utah, Opp.28, by regulations that "targeted the specific roads leading to the SNF facility," Opp.29. But Virginia has likewise sought to "systematically block" Petitioners from engaging in uranium milling and tailings management operations by targeting the specific activity—uranium mining—that leads directly to milling and tails management. *Skull Valley* cannot be reconciled with the holding below, nor can the Second Circuit's holding that courts will "not blindly accept the articulated purpose of a state statute for preemption purposes" in this context. *Entergy*, 733 F.3d at 416 (brackets omitted).

Finally, as dissenting Judge Traxler also recognized, because "Virginia, not trusting that the federal government has sufficiently protected against the radiological dangers of uranium milling and tailings management, has unilaterally sought to *prevent the involvement of the very private-sector forces that the Act was designed to unleash*," Pet.App.47a-48a, it is also in fatal conflict with the AEA's purposes and objectives.[1]

1. Respondents assert at the outset that no "enacted statutory text" supports preemption. Opp.19 (citation omitted). Not so. The statutory text that

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[1] The Commonwealth's suggestion that we have "abandoned the conflict-preemption argument," Opp.18, is incorrect. Indeed, as the Commonwealth itself admits, that argument plainly "falls within the scope of the question presented." Opp.32.

preempts Virginia's ban is the same statutory text at issue in *PG&E*, *English*, and *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238 (1984): States may regulate activities that fall within the NRC's ambit only for "purposes other than protection against radiation hazards." 42 U.S.C. § 2021(k).

Respondents also claim that the purpose and legislative history of Section 2021(k) indicate that it has no preemptive force. Opp.6, 20-21. But as this Court explained in *PG&E*—after surveying the very legislative history upon which Respondents rely—Section 2021(k) codifies "the distinction drawn in 1954 between the spheres of activity left respectively to the federal government and the states." 461 U.S. at 210. Under Respondents' view, this Court's interpretation of Section 2021(k) was flatly wrong from the get-go, and the Court's efforts to define the scope of the preempted field were all pointless, since *there is no such preempted field.*

2. Respondents' central argument—again, that the NRC does not regulate uranium mining, ergo "nothing in the Act prevents States from regulating or banning such mining, *regardless* of the State's alleged purpose," Opp.1—is a non-sequitur. Because Section 2021(k) "[has] defined the pre-empted field, in part, by reference to the motivation behind the state law," *English*, 496 U.S. at 84, one can determine whether a state law is preempted only by examining its purpose without regard to what activity the State purports to be regulating. Respondents thus assume a conclusion that can be reached only at the end of *PG&E*'s purpose inquiry, and then they use it to justify not conducting the required inquiry in the first place.

This upside-down approach is inconsistent with the very nature of an inquiry into purpose or motive. No examination of motive is necessary when a challenged state law *on its face* regulates the radiological hazards of an activity within the purview of the AEA. A pretext analysis comes into play only when a State *claims* to be exercising power legitimately in its hands—whether that be regulating "the generation and sale of electricity," *PG&E*, 461 U.S. at 194, or "law enforcement, fire protection, waste and garbage collection and other similar matters," *Skull Valley*, 376 F.3d at 1247, or, here, the mining of uranium. The literacy tests of the Jim Crow era would still be on the books today if the courts had been compelled to blind themselves to the laws' true purpose. Like the Equal Protection Clause, "the Supremacy Clause cannot be evaded by formalism." *Haywood v. Drown*, 556 U.S. 729, 742 (2009).

Respondents, however, take traditional pretext analysis into new and strange territory, for they defend their pretext *as a pretext*. They admit the preempted purpose of the mining ban and say, "So what?"

3. Nor can Respondents' insistence that States may regulate uranium mining "for *any* reason," Opp.17, reconcile the decision below with the holdings of "each Court of Appeals addressing the issue since *Pacific Gas*." Pet.App.42a (Traxler, J., dissenting). Put simply, if the conclusion that "nothing in the [AEA] regulates" an activity meant "that States can regulate or prohibit [it] for *any* reason," Opp.17, then several of the Utah laws struck down by the Tenth Circuit in *Skull Valley* would still be on the books. Plainly, laws regulating traffic on state roads, the provision of police and fire protection, and garbage removal and sewer

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access are in the heartland of state police powers and are at least as far "outside [the] purview" of the AEA as uranium mining. Opp.1. Utah argued, just like Respondents, that the challenged state laws regulating those activities "are not preempted because they concern areas that characteristically have been governed by the States." *Skull Valley*, 376 F.3d at 1247 (quotation marks omitted). Unlike the panel below, however, the Tenth Circuit recognized that the existence of state authority over these activities

> does not trump the preemption analysis that the controlling Supreme Court decisions require us to undertake. Under that analysis, we consider the purpose and effect of the state law at issue, and, as a result, a state cannot use its authority to regulate law enforcement and other similar matters as a means of regulating radiological hazards.

Id. at 1247-48.

Respondents attempt to distinguish *Skull Valley*, but each of the distinctions they offer is illusory. Respondents emphasize that some of the provisions invalidated by the Tenth Circuit "specifically mention[ed] SNF storage." Opp.29. But that point is irrelevant, since Respondents must concede that others "did not mention SNF activities by name," *id.*, and were nonetheless struck down.

Respondents argue that *Skull Valley*'s treatment of those pretextual provisions is distinguishable because Utah "targeted the specific roads leading to the SNF facility and prevented their use," and legislative history revealed that this was designed for the purpose of regulating radiological hazards entrusted to the NRC. *Id.* But Virginia's uranium ban

likewise "target[s]" the only viable uranium deposit in the State and "prevent[s]" it from being mined for the purpose of regulating radiological hazards (arising from milling and tailings management) that are entrusted to the NRC.

Finally, Respondents claim that *Skull Valley* is different because the laws in question there "were part of an integrated package of laws specifically targeting and blocking the SNF facility." Opp.29-30. This too is wrong. Here the challenged uranium ban was enacted as part of a larger package, the balance of which explicitly focused upon concerns about the radiological safety of milling and tailings storage. *See* Pet.28-29; Pet.App.184a-85a (directing study of the "reagents and processing materials to be used" in milling operations, the "quantity and quality of liquid and solid wastes," "the quantity and characteristics of the tailings," and the potential "atmospheric releases and the methods for controlling such releases").

Respondents also fail to resolve the conflict between the panel's decision and the Second Circuit's holding in *Entergy*. There, the challenged Vermont law regulated activity—the generation and sale of electric power—over which the AEA expressly preserved state authority, *see* Pet.31 (citing 42 U.S.C. § 2018), and specifically to evade preemption under *PG&E*, the Vermont Legislature included detailed findings asserting that the law was not motivated by impermissible radiological safety concerns. *Entergy*, 733 F.3d at 415-16. In contrast to the panel below, the Second Circuit refused to end its "inquiry ... at the text of the statute." *Id.* at 416. The invalidity of Virginia's ban follows *a fortiori* from *Entergy*, for here Respondents have *conceded* that its purpose was grounded in impermissible concerns about the

radiological safety of uranium milling and tailings management that are regulated exclusively by the NRC.

4. The field preempted by the AEA is also defined in part "by the state law's actual effect on nuclear safety," *English*, 496 U.S. at 84, and Virginia's uranium ban also directly encroaches upon this portion of the preempted field. The direct, intended effect of the ban on mining uranium ore has been to prevent the subsequent milling of that ore and the storage of the resulting tailings in the Commonwealth. Uranium ore obviously will not be milled, nor will tailings be created and stored, if it is never mined in the first place. As Petitioners' complaint alleges, the "true design and function of Virginia's ban on uranium mining ... is to act as an absolute bar on the construction of a tailings management facility in the Commonwealth." Pet.App.232a.

Respondents nevertheless argue that the ban on mining has no "direct and substantial effect" on activities regulated by the NRC, because it merely "reduces the demand for uranium milling and tailings management by reducing the supply of native ore for processing." Opp.26. That is akin to arguing that a ban on the production of silicon chips would have only an "indirect" effect on computer sales, since it would merely reduce the demand for computers by "reducing the supply" of one necessary material. Because Petitioners' deposit is the only economically viable source of uranium within hundreds of miles of the Commonwealth, the effect of the ban on mining is not simply to "reduce[ ] the demand for uranium milling and tailings management" in Virginia, *id.*, but rather to completely eliminate it. The Commonwealth well understood this to be true; again, Respondents have

conceded uranium mining was banned for the purpose of preventing milling and tailings management.

Respondents' disingenuous argument on this point only serves to further underscore the split of circuit authority created by the decision below. In *Skull Valley*, the Tenth Circuit held that the "Road Provisions" were preempted not only because of their impermissible purpose but also because "by jeopardizing access to the proposed SNF storage facility, the Road Provisions directly and substantially affect decisions regarding radiological safety levels by those operating nuclear facilities." 376 F.3d at 1253. Like Respondents here, Utah contended that this effect was too indirect, since the facility would "not need road access at all" if the storage company chose "to construct a rail line" leading to it. *Id.* The Tenth Circuit rejected that argument, noting that this "contingenc[y]" did nothing to ease the "substantial obstacle [the provisions pose] to the construction of an SNF storage facility now." *Id.* The effect of the mining ban on preempted activities can be dismissed as "indirect" only by repudiating *Skull Valley's* conclusion on this point as well.[2]

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[2] Contrary to Respondents' argument, *see* Opp.25-27, the state tort laws at issue in *Silkwood* and *English* are not remotely analogous to the uranium ban. Those tort remedies might have tangentially affected a nuclear facility's decision-making related to radiological safety by "attach[ing] additional consequences" to the conduct giving rise to the tort claims, but the same could be said of "every state law that in some remote way may affect the nuclear safety decisions," such as "state minimum wage and child labor laws." *English*, 496 U.S. at 85. In contrast, the ban on uranium mining has its intended effect on its intended target—it completely eliminates milling and tails management operations.

5. The panel's decision has dangerous implications for our economy, national security, and the fate of preemption doctrine. The Commonwealth labors to minimize some of these threats, but its arguments are not reassuring.

Most critically, Respondents say *nothing* to address the decision's consequences for preemption jurisprudence under the AEA and more generally. The AEA carefully delineates the boundaries between state and federal authority over nuclear matters, *see* Brief of Senators Cotton, Inhofe, and Cruz as *Amici Curiae* in Support of Petitioners 5-10 (May 25, 2017) ("Senators' Amicus"), and *PG&E*'s preemption analysis has for thirty years safeguarded this balance. The majority's blinkered approach, by allowing States to nullify the AEA so long as they act pretextually, threatens to upend this equilibrium. *See* Brief for *Amicus Curiae* the Chamber of Commerce of the United States of America in Support of Petitioners 8-11 (May 25, 2017) ("Chamber's Amicus"). And because this elevation of form over substance is at war with this Court's preemption doctrine more generally, the threat posed by the panel's decision extends far beyond the boundaries of the AEA. *See id.* at 11-14.

Moreover, the immediate consequences of the decision below alone justify this Court's review. While nuclear energy supplies 20 percent of our energy needs, little more than five percent of the uranium needed to fuel our reactors is produced domestically. More troubling, 38 percent of uranium imports come from Russia and Russia-allied states. (Respondents cryptically say we "exaggerate" this amount, but the percentage they come up with is the same. *Compare* Opp.36-37, *with* Pet.7.)

That dependency not only undercuts our domestic interests, *see* Chamber's Amicus 5-8; it also damages our national security by giving Russia geopolitical leverage, *see* Senators' Amicus 17-18. Moreover, it impedes our ability to replenish the stockpiles of uranium used in our naval vessels and nuclear arsenal. *See id.* at 15-17. As the United States explained in its petition in *United States v. Eurodif, S.A.*, ensuring a healthy domestic uranium industry is "a matter of compelling importance to U.S. national security interests." Pet.App.347a.[3] Permitting Petitioners to mine their massive uranium deposit would do much to solve our dependency on foreign imports.

Respondents' attempt to diminish these risks falls flat. Respondents claim that the uranium "market is glutted" by transfers out of the Department of Energy's ("DOE") stockpile. Opp.35. But pointing to DOE reserves cannot solve the problem created by the decision below. Most fundamentally, DOE is legally prohibited from artificially flooding the market with uranium from its stockpile precisely because it is in the national interest to protect a sustainable domestic production capacity. *See* 42 U.S.C. §§ 2296b-3(a), 2297h-10(d)(2)(B).

Moreover, the factual predicate for Respondents' argument is false. Respondents cite a 2013 DOE

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[3] As Respondents note, *Eurodif* involved foreign dumping of enriched uranium, Pet.7, which threatened a different phase of the uranium fuel cycle—the domestic enrichment of uranium that has already been mined, Pet.App.328a-29a. But the concerns raised by the Solicitor General in that case apply equally here. After all, the domestic production of unenriched uranium is an essential predicate step to enriching it.

report for the proposition that the Government's inventories could last "at least 20 years," Opp.35, but DOE's subsequent 2017 determination concludes that under the current rate of transfer, its stockpile will actually be "exhausted in 2021," 82 Fed. Reg. 21,594, 21,597 (2017), long before supply from Petitioners' deposit would come on line.

CONCLUSION

The Court should grant the writ.

August 15, 2017

Respectfully submitted,

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No. 16-1275

In the Supreme Court of the United States

VIRGINIA URANIUM, INC., ET AL., PETITIONERS

v.

JOHN WARREN, ET AL.

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT

BRIEF FOR THE UNITED STATES AS AMICUS CURIAE

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QUESTION PRESENTED

Whether the Atomic Energy Act of 1954 (AEA), 42 U.S.C. 2011 *et seq.*, preempts state laws that prohibit activities within a State's regulatory jurisdiction (here, conventional uranium mining) when such laws are grounded in radiological-safety concerns about related activities that are federally regulated under the AEA (here, the milling of uranium ore and disposal of "tailings" byproduct material).

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BRIEF FOR THE UNITED STATES AS AMICUS CURIAE

INTEREST OF THE UNITED STATES

This brief is submitted in response to the Court's order inviting the Solicitor General to express the views of the United States. In the view of the United States, the petition for a writ of certiorari should be granted.

STATEMENT

1. a. The Atomic Energy Act of 1954 (AEA), 42 U.S.C. 2011 *et seq.*, establishes a comprehensive scheme for the regulation and development of nuclear energy. The AEA eliminated the federal government's "monopoly" over the "use, control, and ownership of nuclear technology," *Pacific Gas & Elec. Co.* v. *State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 206 (1983) (*Pacific Gas*), and thereby sought "to encourage widespread participation in the development and utilization of atomic energy for peaceful purposes to the maximum extent consistent with the common defense and security and with the health and safety of the public," 42 U.S.C. 2013(d).

Responsibility for implementing the AEA is shared among the Nuclear Regulatory Commission (NRC), which serves as principal licensing and safety regulator, see 42 U.S.C. 5841-5845; the U.S. Department of Energy (DOE), which oversees federal research and promotional activities, see 42 U.S.C. 5811-5813, 7151(a); and the Environmental Protection Agency (EPA), which establishes generally applicable standards for certain radiation hazards, see, *e.g.*, 42 U.S.C. 2022.[1]

Among other responsibilities, NRC licenses and regulates the transfer, possession, use, and disposal of nuclear materials throughout the nuclear fuel cycle. "[S]ource material," including uranium, is regulated upon removal from its place of deposit in nature. 42 U.S.C. 2092; see 42 U.S.C. 2014(z) (defining "source material" to include "uranium"). The AEA provides that "no person may transfer or receive in interstate commerce * * * any source material after removal from its place of deposit in nature" unless "authorized by a general or specific license issued by [NRC]." 42 U.S.C. 2092; see 10 C.F.R. Pt. 40 (implementing regulations).

The AEA requires similar licenses for the transfer or possession of "special nuclear material," which includes uranium that has been "enriched in the isotope 233 or in the isotope 235." 42 U.S.C. 2014(aa); see 42 U.S.C. 2073-2074 (2012 & Supp. III 2015) (licensing requirements); 10 C.F.R. Pt. 70 (implementing regulations). The AEA also requires licenses for the transfer or possession of any "byproduct material" that is generated during nuclear-fuel production or use. See 42 U.S.C. 2014(e)(1)-(4) (defining several categories of "byproduct material");

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[1] These functions were allocated to NRC, DOE, and EPA in the 1970s, after the Atomic Energy Commission was abolished. See *Huffman* v. *Western Nuclear, Inc.*, 486 U.S. 663, 666 n.4 (1988).

42 U.S.C. 2111-2114 (licensing requirements); 10 C.F.R. Pts. 30-39 (implementing regulations). NRC also requires licenses for the operation of nuclear utilization and production facilities, including nuclear power plants, uranium enrichment facilities, and fuel-fabrication facilities, as well as spent-nuclear-fuel storage installations. See 42 U.S.C. 2014(v) and (cc), 2131-2133; 10 C.F.R. Pts. 50, 52, 72 (implementing regulations).

b. Nuclear source material may be obtained through several means. This case concerns conventional uranium recovery, through which uranium ore is excavated from the ground through open-pit or underground mining and then subjected to above-ground chemical processing. Pet. App. 4a. NRC does not regulate the physical excavation of uranium ore through conventional mining (as opposed to other, "in situ" methods of uranium recovery). See *In re Hydro Res., Inc.*, 63 N.R.C. 510, 512-513 (2006). But NRC requirements begin to apply once uranium is removed from its "place of deposit in nature." 42 U.S.C. 2092; see 10 C.F.R. 40.3; p. 2, *supra*.

Once excavated, the uranium ore is transferred by truck or conveyor belt to a nearby mill for processing. "Milling" involves physically grinding the ore into particles and then applying chemicals that separate the uranium from the surrounding rock. Pet. App. 54a-55a. This process generates a small quantity of concentrated uranium known as "yellowcake," as well as a large amount of sandy waste known as "tailings." *Id.* at 4a, 54a-55a & n.2; see H.R. Rep. No. 1480, 95th Cong., 2d Sess. Pt. I, at 11 (1978) (noting that milling 2000 pounds of uranium ore yields "only 1 to 5 pounds of usable uranium").

The yellowcake is "sold and shipped off-site for enrichment," Pet. App. 23a, while the tailings are typically

stored at a nearby site. Because uranium mill tailings contain several substances that are potentially hazardous to human health, *id.* at 205a, 210a, they are subject to extensive federal regulation. See 42 U.S.C. 2014(e)(2) (defining "byproduct material" to include uranium mill tailings). EPA is responsible for promulgating generally applicable health, safety, and environmental standards associated with the processing and disposal of uranium mill tailings. 42 U.S.C. 2022(b)(1)-(2); see 40 C.F.R. Pt. 192 (containing standards). NRC implements these standards through regulations and site-specific licensing conditions. See 42 U.S.C. 2111 (requiring licenses for byproduct material); 10 C.F.R. 40.1-40.3, 40.20-40.21, 40.26-40.28, 40.31(h), 40.32, 40.51 (regulating tailings "[b]yproduct [m]aterial" as defined in 10 C.F.R. 40.4); 10 C.F.R. Pt. 40, App. A (establishing "criteria relating to the operation of uranium mills and the disposition of tailings or wastes" from milling) (capitalization omitted).

c. Since 1959, the AEA has empowered NRC to enter agreements that authorize States to license and regulate the transfer, possession, use, and disposal of byproduct material, source material, and/or sub-critical quantities of special nuclear material. 42 U.S.C. 2021(b). NRC approves such an agreement under Section 2021 if the State has developed a regulatory program that is both "adequate to protect the public health and safety with respect to the materials within the State covered by the proposed agreement" and "compatible with [NRC's] program for the regulation of such materials." 42 U.S.C. 2021(d)(1)-(2).[2] Only a State that has entered into a Section 2021 agreement may regulate radiological hazards associated

[2] Certain AEA responsibilities are reserved to NRC and cannot be delegated to a State. 42 U.S.C. 2021(c).

with AEA materials. Cf. 42 U.S.C. 2021(b) (authorizing state regulation "[d]uring the duration of such an agreement"); S. Rep. No. 870, 86th Cong., 1st Sess. 12 (1959) (*Senate Report*) (stating that, absent such an agreement, "the Commission has exclusive authority to regulate for protection against radiation hazards").

Section 2021 also provides that "[n]othing in this section shall be construed to affect the authority of any State or local agency to regulate activities *for purposes other than protection against radiation hazards*." 42 U.S.C. 2021(k) (emphasis added). The italicized language "underscore[s] the distinction * * * between the spheres of activity left respectively to the Federal Government and the States." *Pacific Gas*, 461 U.S. at 210. Under that division, "the Federal Government maintains complete control of the safety and 'nuclear' aspects of energy generation," while "the States exercise their traditional authority over the need for additional generating capacity, the type of generating facilities to be licensed, land use, ratemaking, and the like." *Id.* at 212; see *id.* at 205 (similar).

2. a. In the late 1970s, the "largest known uranium deposit in the United States" was discovered in Pittsylvania County, Virginia. Pet. App. 5a, 216a. Following that discovery, the Virginia General Assembly directed a commission to "evaluate the environmental effects of uranium exploration, mining and milling," and to identify "any possible detriments" from those activities to the "health, safety, and welfare of Virginia citizens." 1981 Va. Acts 1404 (Pet. App. 169a-170a). In 1982, the General Assembly enacted a law that permitted uranium exploration, but imposed a one-year moratorium on uranium mining. See 1982 Va. Acts 426 (Pet. App. 170a-177a).

In 1983, the General Assembly extended the moratorium indefinitely. See 1983 Va. Acts 3 (1983 Act) (Pet. App. 177a-189a). It found that, "while uranium mining and milling activity can generate substantial benefits, it also raises a wide range of environmental and other local concerns." Pet. App. 178a. The 1983 Act directed that "permit applications for uranium mining shall not be accepted by any agency of the Commonwealth * * * until a program for permitting uranium mining is established by statute." *Id.* at 177a-178a. The 1983 Act also created a working group to consider, *inter alia*, the risk that "radionuclides" generated by "mining, milling and tailings management" could contaminate the surrounding water, air, and plant and animal life. *Id.* at 183a-184a.

In 1985, the commission and working group issued their final report. Pet. App. 219a. A majority of participants recommended lifting the moratorium, but only if the General Assembly "simultaneously" adopted certain recommendations "to assure adequate state regulation of uranium mining and milling." See D. Ct. Doc. 48-17, at 8 (Sept. 11, 2015). Those included the "essential" recommendation that Virginia become an "agreement state" under Section 2021, with the right to regulate milling and tailings storage, *id.* at 6; cf. 42 U.S.C. 2021, as well as proposed technical limits on radiological emissions from milling and tailings-storage activities, see D. Ct. Doc. 48-17, at 6-7. Despite those recommendations, the General Assembly neither lifted the moratorium nor enacted a "comprehensive mining, milling and tailing statute." See D. Ct. Doc. 48-14, at 7.

b. In 2009, Virginia signed a Section 2021 agreement with NRC, thereby acquiring regulatory authority over "[s]ource materials," "[s]pecial nuclear materials," and specified categories of "[b]yproduct materials" within

the Commonwealth. Pet. App. 300a; see *id.* at 298a-305a. The agreement expressly excluded the regulation of uranium mill tailings, however. See *id.* at 301a (excluding "[t]he regulation of byproduct material as defined in Section 11e.(2) of the [AEA]"); cf. 42 U.S.C. 2014(e)(2).

c. For several decades, the owners of the Pittsylvania County uranium deposit did not pursue efforts to overturn the Commonwealth's mining moratorium. When uranium prices rose sharply in the mid-2000s, however, the landowners lobbied for repeal of the ban. Pet. App. 222a. The General Assembly, the Governor, and Commonwealth agencies commissioned studies addressing the feasibility, benefits, and risks of potential uranium development. See *id.* at 222a-223a, 227a-228a. In 2013, bills to lift the moratorium were introduced in the General Assembly, but those legislative efforts failed. *Id.* at 228a-229a.

3. Petitioners are the current landowners of the Pittsylvania County uranium deposit. In 2015, petitioners brought suit in federal district court, asserting that the Commonwealth's moratorium was preempted by the AEA and seeking declaratory and injunctive relief. Pet. App. 190a-238a.

The district court dismissed petitioners' complaint for failure to state a claim. Pet. App. 53a-82a. The court acknowledged petitioners' allegation that the moratorium rested on "radiological safety concerns" associated with milling and tailings management. *Id.* at 68a. The court nonetheless concluded that the moratorium was not preempted because it facially applied only to mining, and conventional uranium mining is not regulated by NRC. *Id.* at 71a-80a. The court recognized that the mining ban "might obviate one's decision to mill and

manage the mill tailings" in Virginia, but suggested that "such a consequence [was] too far attenuated" to result in preemption. *Id.* at 80a.

4. The court of appeals affirmed. Pet. App. 1a-52a.

a. The court of appeals held that Virginia's moratorium was not preempted. Pet. App. 13a-19a. The court acknowledged that "uranium milling and tailings storage" are "regulated by the NRC," and it agreed that "[S]tates may therefore not regulate them except for purposes other than protection against radiation hazards." *Id.* at 13a-14a. But the court found it dispositive that "the plain language of the Commonwealth's ban does not mention uranium milling or tailings storage," *id.* at 14a, and it declined to "look past the statute's plain meaning to decipher whether the legislature was motivated to pass the ban by a desire to regulate uranium milling or tailings storage," *ibid.* While acknowledging that "sister circuits" had found state laws motivated by radiological-safety concerns to be preempted, the court found those decisions "distinguishable" because they involved laws that "surgically targeted," or "purport[ed] to regulate" directly, activities within NRC's jurisdiction. *Id.* at 16a-18a.

b. Judge Traxler dissented. Pet. App. 20a-52a. He explained that "established Supreme Court law makes clear that the AEA preempts state statutes enacted for the purpose of protecting against the radiological dangers of activities the AEA regulates," including "uranium milling and tailings management." *Id.* at 52a; see *id.* at 32a-38a. He further noted respondents' concession, for purposes of their motion to dismiss, that the Commonwealth had "banned uranium mining only as a means to prevent milling and tailings management from occurring in Virginia." *Id.* at 20a, 27a. Because "Congress

has taken away a state's ability to limit mining for th[at] particular reason," *id.* at 20a, Judge Traxler concluded that petitioners had stated a valid preemption claim.

DISCUSSION

The Fourth Circuit held that a Virginia law allegedly motivated by concerns about the radiological safety of uranium milling and tailings-management activities, and intended to prevent those activities from occurring within the Commonwealth, may escape preemption so long as the law operates directly and immediately on an antecedent activity (mining) that is subject to state control. That cramped view of AEA preemption conflicts with this Court's decision in *Pacific Gas & Electric Co.* v. *State Energy Resources Conservation & Development Commission*, 461 U.S. 190 (1983) (*Pacific Gas*), and with published decisions of the Second and Tenth Circuits. The question presented is important and likely to recur in other nuclear-safety contexts, and this case is an appropriate vehicle to resolve it. The petition for a writ of certiorari therefore should be granted.

A. The Court Of Appeals' Decision Is Incorrect

Petitioners' complaint states a claim that Virginia's moratorium on uranium mining is preempted by the AEA.

1. Federal law is "the supreme Law of the Land," U.S. Const. Art. VI, Cl. 2, and it may preempt state law in several ways. "First, Congress can define explicitly the extent to which its enactments pre-empt state law." *English* v. *General Elec. Co.*, 496 U.S. 72, 78 (1990). "Second, in the absence of explicit statutory language, state law is pre-empted where it regulates conduct in a field that Congress intended the Federal Government to occupy exclusively." *Id.* at 79. "Finally, state law is pre-empted to the extent that it actually conflicts with

federal law," including when "state law 'stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress.'" *Ibid.* (citation omitted).

This Court has addressed the AEA's preemptive reach on several occasions. In *Pacific Gas*, the Court concluded that the "Federal Government has occupied the entire field of nuclear safety concerns, except [for] the limited powers expressly ceded to the States." 461 U.S. at 212. The Court observed that the AEA gives NRC "exclusive jurisdiction to license the transfer, delivery, receipt, acquisition, possession, and use of nuclear materials," *id.* at 207, and permits state regulation of such materials only if authorized by agreement, *id.* at 208-209. The Court also explained that the AEA's preservation of state authority to "regulate activities for purposes *other than protection against radiation hazards*," 42 U.S.C. 2021(k) (emphasis added), "underscored the distinction" drawn by Congress "between the spheres of activity left respectively to the Federal Government and the States." 461 U.S. at 210. Under that division of responsibility, the federal government "regulate[s] the radiological safety aspects involved" in AEA activities—there, the "construction and operation of a nuclear plant"—while the States retain their "traditional responsibility" to "determin[e] questions of need, reliability, cost, and other related state concerns" not involving radiological safety. *Id.* at 205. The Court found that the state statute at issue in *Pacific Gas*, which imposed a moratorium on construction of new nuclear plants, survived preemption only because the State had plausibly explained that the purpose of its legislation was to address "economic problems, not radiation hazards." *Id.* at 213; see *id.* at 213-216.

In the present case, the court of appeals cited other language in *Pacific Gas* commenting on the difficulty of ascertaining "legislative motive." Pet. App. 14a (quoting *Pacific Gas*, 461 U.S. at 216). The *Pacific Gas* Court made those observations, however, only after stating that it was "necessary to determine whether there [was] a nonsafety rationale for" the challenged California law, 461 U.S. at 213; that California had asserted an economic, non-safety-related rationale for that law, *ibid.*; and that the court of appeals in that case had found the law to be "directed towards purposes other than protection against radiation hazards," *id.* at 214 (citation omitted). Here, by contrast, the Fourth Circuit simply "decline[d] to examine why the Commonwealth chose to ban uranium mining," Pet. App. 15a, thus treating as irrelevant petitioners' allegation that Virginia's mining moratorium is intended to address radiological-safety hazards associated with milling and tailings-management activities.

In *Silkwood* v. *Kerr-McGee Corp.*, 464 U.S. 238 (1984), the Court explained that *Pacific Gas* had "examined the relationship between federal and state authority in the nuclear energy field" and had "concluded that States are precluded from regulating the safety aspects of nuclear energy." *Id.* at 240-241. The Court observed that "Congress' decision to prohibit the States from regulating the safety aspects of nuclear development was premised on its belief that the Commission was more qualified to determine what type of safety standards should be enacted in this complex area." *Id.* at 250.

In *English* v. *General Electric Co.*, *supra*, the Court explained that the AEA establishes two related forms of field preemption. 496 U.S. at 84. Observing that *Pacific Gas* had "defined the pre-empted field, in part, by

reference to the motivation behind the state law," the Court reaffirmed that a state law "motivated by safety concerns" about NRC-regulated activities is preempted. *Ibid.* The Court further held that even state regulation "'enacted out of nonsafety concerns'" would be preempted if it had a sufficiently "direct and substantial effect" on NRC licensees' decisions "concerning radiological safety levels." *Id.* at 84-85 (quoting *Pacific Gas*, 461 U.S. at 212). Thus, "even as * * * part of the preempted field is defined by reference to the purpose of the state law in question," "another part of the field is defined by the state law's actual effect on nuclear safety." *Id.* at 84.

2. a. Petitioners have adequately alleged that Virginia's moratorium falls within the preempted "field of nuclear safety concerns." *English*, 496 U.S. at 82 (quoting *Pacific Gas*, 461 U.S. at 212). Petitioners contend that the Commonwealth has banned uranium mining not because of concerns about mining per se, but because of fears about radiological hazards associated with the next steps of the uranium-development process, which NRC regulates under the AEA. Petitioners allege that the "true design" of the moratorium is "to act as an absolute bar on the construction of a tailings management facility," which state legislators feared would lead to radioactive contamination of the groundwater and environment. Pet. App. 232a.

If petitioners' allegations are correct, Virginia's moratorium is preempted. The radiological safety of milling and tailings management is subject to exclusive federal oversight. Just as "[a] State moratorium on nuclear construction * * * falls squarely within the prohibited field" if such a moratorium is "grounded in safety concerns" about the operation of NRC-licensed nuclear power

plants, *Pacific Gas*, 461 U.S. at 213, so too a State's moratorium on uranium mining is preempted if that moratorium is grounded in safety concerns about the operation of NRC-licensed milling and tailings-management facilities. The fact that conventional mining of uranium ore is not subject to NRC regulation does not save Virginia's law. A State's purposeful effort to regulate the radiological hazards of AEA activities is preempted even if the State attempts to regulate those hazards indirectly, as by prohibiting necessary antecedent activities that fall outside direct federal control.

Pacific Gas illustrates this point. The state agency in that case argued that, "although safety regulation of nuclear plants by States is forbidden, a State may completely prohibit new construction until its safety concerns are satisfied by the Federal Government." 461 U.S. at 212. The Court "reject[ed] this line of reasoning," explaining that "the Federal Government has occupied the entire field of nuclear safety concerns" associated with nuclear-plant operations. *Ibid.* The Court therefore found it "necessary to determine whether there [was] a nonsafety rationale" for California's moratorium on plant construction. *Id.* at 213. *Pacific Gas* thus establishes that "a state cannot use its authority to regulate law enforcement and other similar matters as a means of regulating [the] radiological hazards" associated with AEA-regulated activities. *Skull Valley Band of Goshute Indians* v. *Nielson*, 376 F.3d 1223, 1248 (10th Cir. 2004) (*Skull Valley*), cert. denied, 546 U.S. 1060 (2005).

b. A state law banning uranium mining based on radiological-safety concerns about milling and tailings management also runs afoul of conflict-preemption principles. "[A] state judgment that nuclear power is

not safe enough to be further developed would conflict directly with the countervailing judgment of the NRC." *Pacific Gas*, 461 U.S. at 213. Here, Virginia has allegedly "interfere[d] with the objective of the federal regulation" by deciding for itself that milling and tailings management cannot safely be undertaken. *Id.* at 219. But Congress committed those safety considerations to NRC's oversight. See *id.* at 212 (recognizing that a State's enactment of technical specifications for a nuclear power plant would "directly conflict with the NRC's exclusive authority over plant construction and operation"); cf. *id.* at 226 (Blackmun, J., concurring in part and concurring in the judgment) ("The Court suggests that a safety-motivated state ban on nuclear plants would be pre-empted under th[e] [conflict-preemption] standard as well."). If petitioners' allegations are true, Virginia's moratorium has "circumvented the AEA's requirements and frustrated its objectives" by intentionally "prevent[ing] the occurrence of" activities that Congress intended NRC to regulate, for reasons committed to NRC's jurisdiction. Pet. App. 21a, 52a (Traxler, J., dissenting).

States concerned about radiological hazards may utilize other mechanisms that do not stand as an obstacle to Congress's objectives. States may seek NRC's authorization to regulate uranium mill tailings. See pp. 4-5, *supra*. If granted this authority, a State may impose radiological-safety standards that are "more stringent than" those adopted and enforced by NRC. 42 U.S.C. 2021(*o*)(2). Despite obtaining a Section 2021 agreement for other kinds of nuclear materials, Virginia declined

to seek such authority for uranium mill tailings. See Pet. App. 21a, 49a-50a (Traxler, J., dissenting).[3]

3. In holding that Virginia's moratorium was not preempted, the court of appeals observed that the statute "does not mention uranium milling or tailings management," Pet. App. 14a, and the court "decline[d]" to "look past the statute's plain meaning to decipher whether the legislature was motivated" by an impermissible radiological-safety consideration, *ibid.* It is well-established, however, that field-preemption analysis under the AEA requires assessing the State's purpose. See 42 U.S.C. 2021(k) (saving from preemption state regulation undertaken "for purposes other than protection against radiation hazards"); *English*, 496 U.S. at 84 (reaffirming that "part of the pre-empted field is defined by reference to the purpose of the state law in question"); *Pacific Gas*, 461 U.S. at 214 (deferring to lower court's factual assessment that the challenged law was "directed towards purposes other than protection against radiation hazards") (citation omitted).

Respondents' alternative arguments also lack merit. Respondents assert that, because "nothing in the [AEA] regulates the conventional mining of uranium on non-federal lands," the "States can regulate or prohibit such mining for *any* reason, including radiological safety concerns." Br. in Opp. 17. Respondents view the "purpose" test as preempting a state law only if it *both* "regulates an NRC-regulated activity" *and* does so "based

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[3] States concerned about the safety of AEA-regulated activities may also participate in NRC licensing and rulemaking proceedings and may seek judicial review of NRC's determinations if they are aggrieved. See *Entergy Nuclear Vt. Yankee, LLC* v. *Shumlin*, 733 F.3d 393, 427-428 (2d Cir. 2013) (noting this point); *Skull Valley*, 376 F.3d at 1254 (same).

on radiological safety concerns." *Id.* at 18. But that view is irreconcilable with *Pacific Gas*, which observed that a statute that "seek[s] to regulate the construction or operation of a power plant" would "clearly be impermissible * * * even if enacted out of nonsafety concerns." 461 U.S. at 212. Thus, the "purpose" test has practical relevance only where a State is operating within a field where a State enjoys substantive authority to regulate.

State regulation of conventional uranium mining is permissible if that regulation is grounded in concerns about mining itself, which is not subject to NRC regulation. But if Virginia's mining moratorium was intended to address radiological-safety concerns purportedly raised by subsequent milling and tailings management activities—activities that NRC *does* regulate—the State cannot escape preemption simply by imposing its prohibition one step earlier in the production process. In *Pacific Gas*, the Court acknowledged that NRC "was not given authority * * * over the economic question whether a particular [nuclear] plant should be built," 461 U.S. at 207, and it held that a State could forbid such construction if it did so for economic reasons, see *id.* at 213-216. The Court made clear, however, that a functionally identical state-law ban would be preempted if it was "grounded in safety concerns" or rested on "a state judgment that nuclear power is not safe enough to be further developed," since such a judgment "would conflict directly with the countervailing judgment of the NRC." *Id.* at 213; see *ibid.* ("A state moratorium on nuclear construction grounded in safety concerns falls

squarely within the prohibited field."). The same principles apply here.[4]

Respondents are likewise wrong in placing dispositive weight on the fact that the Virginia statute does not expressly "prohibit[] or otherwise regulate[] milling facilities or tailings storage." Br. in Opp. 26; see *id.* at 30. Once uranium ore is mined, milling and tailings management are the next steps in the production process. See pp. 3-4, *supra*. Reports and studies reflect that Virginia decisionmakers understood that mining, milling, and tailings storage would occur at a single "uranium development complex." D. Ct. Doc. 48-14, at 16; see, *e.g.*, D. Ct. Doc. 48-10, at S-1 ("A uranium development facility typically includes a mine, a mill, and a tailings (waste) management area."). Those reports also reflected an awareness that, although "milling and tailings are regulated under federal law," "mining is regulated under state law." D. Ct. Doc. 48-15, at 10. Petitioners have adequately alleged that respondents banned "the antecedent mining of uranium ore" *for the purpose of* rendering infeasible any milling or tailings storage in the Commonwealth. Pet. Reply Br. 1.

Respondents' remaining arguments fare no better. Although Section 2021(k) is framed as a "savings clause"

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[4] If construction of a new nuclear power plant is allowed to proceed, NRC generally exercises exclusive authority over the specifications of its construction (*e.g.*, thickness of spent-nuclear-fuel pool walls). But the state law at issue in *Pacific Gas* addressed the antecedent question *whether* a plant should be constructed, not *how* it should be constructed. See 461 U.S. at 212. The court of appeals in the present case therefore was wrong in describing *Pacific Gas* as involving an activity "clearly committed to the NRC's regulatory authority." Pet. App. 10a & n.2 (citation omitted). The district court committed the same error. See *id.* at 77a-78a.

(Br. in Opp. 6, 20), and the AEA contains no express-preemption provision, such statutory schemes may nonetheless give rise to preemption. See, *e.g.*, *International Paper Co.* v. *Ouellette*, 479 U.S. 481, 493 (1987). Indeed, Section 2021(k) "underscore[s]" Congress's intention that the federal government would possess exclusive authority over "'protection against radiation hazards'" associated with AEA materials. *Pacific Gas*, 461 U.S. at 210 (quoting 42 U.S.C. 2021(k)).[5] And although States may permissibly regulate "radiation hazards * * * outside [NRC's] bailiwick," including hazards associated with "x-ray equipment [and] radon-screening companies," Br. in Opp. 21 (footnote omitted), the moratorium here was allegedly motivated by concerns about uranium milling and tailings management, which are subjects "regulated by the [AEA]," Pet. App. 41a n.13 (Traxler, J., dissenting).

Contrary to respondents' suggestion (Br. in Opp. 22), petitioners' approach would not leave a regulatory lacuna. States retain the authority to regulate conventional uranium mining—or to prohibit it altogether—so long as its laws do not have the "purpose" or "direct and substantial effect" of regulating the radiological hazards of NRC-licensed activities. *English*, 496 U.S. at 85. Thus, applying *Pacific Gas* would not mean that "entities could mine free of government oversight." Br. in Opp. 22 (quoting Pet. App. 13a).

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[5] The bill containing Section 2021(k) originally included a sentence expresaly preempting state laws regulating the radiation hazards of AEA materials. That sentence was struck as "unnecessary" because, "[w]ith or without th[e] sentence," a State could not regulate radiological hazards unless it first "enter[ed] into an agreement with the Commission." *Senate Report* 3.

To be sure, "Congress did not intend that nuclear power be developed 'at all costs,'" and it generally left States free to address concerns other than radiological safety. *Pacific Gas*, 461 U.S. 200; see *id.* at 222-223. But Congress and NRC have made the judgment that milling and tailings management may be undertaken safely under federal regulations. *Id.* at 213. A moratorium intended to render such activities infeasible, based on a State's disagreement with that federal safety judgment, both intrudes upon an exclusively federal field and "stands as an obstacle" to the fulfillment of Congress's objectives. *English*, 496 U.S. at 79 (citation omitted).

B. The Decision Below Conflicts With Decisions Of Other Courts Of Appeals

In addition to conflicting with *Pacific Gas*, the court of appeals' ruling conflicts with decisions of the Second and Tenth Circuits in cases involving analogous claims of AEA preemption. Those courts held that state laws grounded in radiological-safety concerns were preempted, even though the immediate objects of state regulation involved areas of traditional state authority.

In *Skull Valley*, *supra*, the Tenth Circuit considered a series of Utah laws motivated by concerns about the storage and transportation of spent nuclear fuel (SNF). Although some of the challenged laws facially regulated SNF, others did not. One provision converted to state control a county road that led to a proposed SNF storage site. 376 F.3d at 1251-1252. Another provision restricted counties' abilities to provide "law enforcement, fire protection, waste and garbage collection" to SNF storage facilities. *Id.* at 1247. A third provision abolished limited liability for stockholders in companies operating such facilities. *Id.* at 1250-1251. Although the AEA does not regulate state roads, municipal services, or shareholder-

liability rules, the Tenth Circuit concluded that "a state cannot use its authority to regulate" such matters "as a means of regulating radiological hazards" associated with NRC-licensed activities. *Id.* at 1248. The court ultimately found each provision preempted, based on evidence that the State had enacted them to discourage the transportation and storage of SNF "for reasons of radiological safety." *Id.* at 1252; see *id.* at 1245-1248, 1250-1253.[6]

The court of appeals in this case found *Skull Valley* "distinguishable" because Utah's laws "surgically targeted the transportation and storage of spent nuclear fuel." Pet. App. 16a. Petitioners have similarly alleged, however, that Virginia banned uranium mining solely to prevent milling and tailings management. *Id.* at 215a-232a. The court below also suggested that Virginia's "two-sentence moratorium" on uranium mining "pales in comparison" to the "comprehensive scheme" enacted by Utah. *Id.* at 17a. But the Tenth Circuit in *Skull Valley* analyzed the challenged provisions individually, and it held that the AEA preempted even those provisions that did not "specifically mention[] th[e] NRC-regulated activity." *Id.* at 16a; see *id.* at 42a-44a (Traxler, J., dissenting).

The court of appeals' decision also conflicts with *Entergy Nuclear Vermont Yankee, LLC* v. *Shumlin*, 733 F.3d 393 (2d Cir. 2013) (*Entergy*), which concerned a series of Vermont laws providing that a nuclear power plant could renew its operating license and store newly generated SNF only with explicit approval by the state

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[6] When the State petitioned for a writ of certiorari, the United States filed a brief at this Court's invitation expressing the view that the challenged Utah laws were preempted. See U.S. Amicus Br. at 10-19, *Nielson* v. *Private Fuel Storage, L.L.C.*, No. 04-575 (Nov. 4, 2005).

legislature. *Id.* at 401, 403. In an effort to avoid preemption, the legislature included findings that these laws were based on "economic" and other nonsafety concerns. *Id.* at 415-416, 424. But the Second Circuit concluded that the preemption inquiry "[did] not end at the text of the statute," *id.* at 416, and that it was necessary to "determine the actual intent motivating [the laws'] passage," *id.* at 424. The court canvassed the legislative record and ultimately determined that the laws were improperly "grounded in safety concerns" and therefore preempted. *Id.* at 428 (citation omitted); see *id.* at 415-428. This "more searching review" into the laws' "true purpose," which the court understood to be required by *Pacific Gas*, see *id.* at 416, cannot be squared with the Fourth Circuit's refusal to consider anything apart from the statutory text. Cf. Pet. App. 14a.

The court of appeals stated that the Second Circuit in *Entergy* "sought to determine the Vermont legislature's intent only after holding that the challenged law regulated an 'activity'—the operation of nuclear power plants—within the meaning of Section 2021(k) of the [AEA]." Pet. App. 17a. That is incorrect. The Second Circuit found the laws preempted because they were motivated by radiological-safety concerns, not because the laws facially regulated an NRC-regulated activity. See *Entergy*, 733 F.3d at 435 (Carney, J., concurring) (making same observation). Indeed, a state law that directly regulated nuclear-power operations would be preempted "even if enacted out of nonsafety concerns." *Pacific Gas*, 461 U.S. at 212; see *English*, 496 U.S. at 85 n.7; Pet. App. 45a-46a (Traxler, J., dissenting).

C. The Question Presented Is Important And Squarely Presented Here

"'[T]he Federal Government has occupied the entire field of nuclear safety concerns, except the limited powers expressly ceded to the States.'" *English*, 496 U.S. at 82 (quoting *Pacific Gas*, 461 U.S. at 212). This case presents the question whether a State may address purported radiological-safety concerns indirectly, through regulations designed to render practically infeasible activities that the State believes to be unsafe but that are subject to exclusive NRC oversight.

That question is important: The preemptive field of "nuclear safety concerns" covers not only the early stages of fuel development (such as milling and tailings-management), but also each subsequent stage of the nuclear fuel cycle. Under the Fourth Circuit's analysis, States could effectively prevent federally regulated activities that the States believe to be unsafe, by erecting "bottlenecks" at antecedent stages that are not themselves subject to federal regulation. States could, for example, pass laws that impede physical access to nuclear facilities, diminish the availability of source materials or equipment necessary for nuclear development, or erect financial barriers to the development of nuclear energy. States will likely continue to face pressures to restrict or prohibit private nuclear-energy development. See, *e.g.*, *Entergy*, 733 F.3d at 413 & n.20 (noting that the development of interstate energy markets has resulted in "less public support for continued operation of in-state nuclear power plants and greater opposition to such local plants on safety as well as non-safety grounds"). Review here would assist state legislators, as well as lower courts and federal regulators, by clarifying the AEA's preemptive scope.

This case presents a suitable vehicle to address the question presented. Respondents have conceded that, for purposes of their motion to dismiss, the courts should take as true petitioners' allegation that the Virginia moratorium was motivated by radiological-safety concerns. This Court therefore need not decide what evidence would be necessary or sufficient to prove those allegations. Rather, the Court need only decide whether such a motivation, if proved, would provide a sound basis for holding the Virginia moratorium to be preempted, even though the immediate object of the moratorium (uranium mining) is an activity subject to state rather than federal regulation.

CONCLUSION

The petition for a writ of certiorari should be granted.

Respectfully submitted.

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VIRGINIA URANIUM, INC. et al.,
Petitioners,

v.

JOHN WARREN, et al.,
Respondents.

On Petition for Writ of Certiorari to the United States Court of Appeals for the Fourth Circuit

BRIEF FOR *AMICUS CURIAE* THE CHAMBER OF COMMERCE OF THE UNITED STATES OF AMERICA IN SUPPORT OF PETITIONERS

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STATEMENT OF INTEREST[1]

The Chamber of Commerce of the United States of America is the world's largest business federation. It represents 300,000 direct members and indirectly represents the interests of more than 3 million companies and professional organizations of every size, in every economic sector, and from every region of the country. More than 96% of the Chamber's members are small businesses with 100 or fewer employees.

An important function of the Chamber is to represent the interests of its members in matters before the courts, Congress, and the Executive Branch. To that end, the Chamber regularly files *amicus curiae* briefs in cases that raise issues of vital concern to the Nation's business community. The Chamber has participated as *amicus curiae* in nearly every significant federal preemption case decided by this Court over the past decade. *See, e.g.*, *Kindred Nursing Ctrs. L.P. v. Clark*, 581 U.S. ___ (2017); *Coventry Health Care of Mo., Inc. v. Nevils*, 137 S. Ct. 1190 (2017); *Puerto Rico v. Franklin Cal. Tax-Free Trust*, 136 S. Ct. 1938 (2016); *Gobeille v. Liberty Mut. Ins. Co.*, 136 S. Ct. 936 (2016); *Nw., Inc. v. Ginsberg*, 134 S. Ct. 1422 (2014); *Nat'l Meat Ass'n v. Harris*,

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[1] Pursuant to Supreme Court Rule 37.6, *amicus curiae* states that no counsel for any party authored this brief in whole or in part and that no entity or person, aside from *amicus curiae*, its members, and its counsel, made any monetary contribution toward the preparation or submission of this brief. Pursuant to Supreme Court Rule 37.2, counsel of record for all parties received notice of the intent to file this brief at least 10 days before it was due, and have consented to this filing.

565 U.S. 452, 455 (2012); *AT&T Mobility LLC v. Concepcion*, 563 U.S. 333 (2011); *Williamson v. Mazda Motor of Am., Inc.*, 562 U.S. 323 (2011); *Bruesewitz v. Wyeth LLC*, 562 U.S. 223 (2011); *Wyeth v. Levine*, 555 U.S. 555 (2009); *Altria Grp., Inc. v. Good*, 555 U.S. 70 (2008); *Riegel v. Medtronic, Inc.*, 552 U.S. 312 (2008).

The Chamber and its members have a strong interest in this case, as the decision below poses a threat both to the Nation's nuclear energy industry and to preemption doctrine as a whole. Accordingly, the Chamber files this brief in support of the petition for certiorari.

INTRODUCTION

More than 30 years ago, this Court concluded that the federal government has "occupied the entire field of nuclear safety concerns," and that the Atomic Energy Act accordingly preempts any state law "grounded in safety concerns" arising from the production of nuclear energy. *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n* ("*PG&E*"), 461 U.S. 190, 212-13 (1983). In the years since, this Court has reaffirmed that state laws "motivated by safety concerns" stemming from nuclear-related activities fall squarely within the Atomic Energy Act's prohibited field. *See English v. Gen. Elec. Co.*, 496 U.S. 72, 84 (1990); *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 249 (1984). Consistent with that precedent, for years, courts of appeals unanimously concluded that state legislation has no force or effect when its "purpose" is to guard against the same radiation hazards that Congress has given the federal government the exclusive power

to regulate. *See, e.g.*, *Entergy Nuclear Vt. Yankee, LLC v. Shumlin*, 733 F.3d 393 (2d Cir. 2013); *Skull Valley Band of Goshute Indians v. Nielson*, 376 F.3d 1223 (10th Cir. 2004).

Nonetheless, the Fourth Circuit below held that Virginia may ban mining of the Nation's single largest uranium deposit—not for economic or other non-preempted reasons, but simply because Virginia purportedly determined that uranium production is not safe enough, despite pervasive federal regulation. Indeed, the state does not dispute that it banned uranium *mining* at the Coles Hill deposit as a safety measure to prevent radiation exposure allegedly associated with uranium *milling and tailings management*—the federally-regulated extraction and handling of uranium from mined ore that precedes the production of nuclear power. *See* 42 U.S.C. §2021(k) (providing that states retain the power to regulate nuclear energy-related activities only "for purposes *other than protection against radiation hazards*" (emphasis added)). But that is not a judgment for Virginia to make, as any state statute "grounded in [radiological] safety concerns falls squarely within the prohibited field" occupied by the federal government and is preempted. *PG&E*, 461 U.S. at 213. The decision below thus cannot be reconciled with the Act, with this Court's precedents, or with decisions from other courts.

But the problems with the Fourth Circuit's decision do not end there. According to the Fourth Circuit, the reason Virginia's mining ban is not preempted even though it rests on precisely the kind of safety judgment forbidden to the states is because

the ban does not say *on its face* that the state has prohibited uranium *mining* to prevent purportedly unsafe *milling and tailings management* from occurring at Coles Hill. In other words, according to the Fourth Circuit, a state may escape the preemptive force of federal law through the simple expedient of declining to make explicit in its laws its preempted motivations. The decision below thus creates a loophole not just for the Atomic Energy Act, but for all manner of federal statutes and regulations, as it effectively invites states to use labels and form to try to circumvent federal law.

That result cannot be reconciled with the long line of decisions from this Court reiterating that the "Supremacy Clause cannot be evaded by formalism." *Haywood v. Drown*, 556 U.S. 729, 742 (2009). The Fourth Circuit abdicated its judicial responsibility under the Supremacy Clause by declining, *as a matter of law*, to "look past the statute's plain meaning to decipher whether the legislature was motivated to pass the ban by" concerns that Congress has reserved to the federal government alone. Pet.App.14a. Simply put, when a state admittedly regulates for the specific purpose of countermanding federal judgments in an exclusive federal field, its actions are preempted no matter what label or form the state may use. By concluding otherwise, the decision below threatens to disrupt not just the Atomic Energy Act and the critical industry of nuclear power generation—an industry that is responsible for nearly 20% of the Nation's electricity supply—but preemption doctrine as a whole. Accordingly, this Court should grant certiorari to resolve the circuit split that the decision below

creates and restore the full preemptive force of the Atomic Energy Act.

REASONS TO GRANT THE PETITION

I. Nuclear Power Is A Core Component Of The Nation's Energy Supply.

When Congress enacted the Atomic Energy Act, it "determin[ed] that the national interest would be best served if the Government encouraged the private sector to become involved in the development of atomic energy for peaceful purposes under a program of federal regulation and licensing." *PG&E*, 461 U.S. at 207. Since then, nuclear power has become an important component of our country's energy supply. Today, nuclear reactors fueled by uranium are responsible for nearly 20% of the electricity produced in this country. Pet.App.202a. And nuclear energy continues to offer many benefits that confirm its indispensable value to a diversified energy economy; for example, nuclear power "accounts for nearly two-thirds of the country's emissions-free power generation," and nuclear reactors "operate at about a 90% capacity factor, higher than any other fuel type." *See Expand Nuclear Energy Use and Commit to a Nuclear Waste Solution*, U.S. Chamber of Commerce Inst. for 21st Century Energy, http://bit.ly/1nyGP0I (last visited May 24, 2017).

In no small part because of those benefits, the United States "has the greatest number of nuclear reactors in the world at present, and therefore the

greatest demand for nuclear fuel." CA4 JA236.[2] But domestic demand for uranium is not being satisfied by domestic supply. Quite the opposite. In 2015, for example, owners and operators of civilian nuclear power reactors in the United States purchased 57 million pounds of uranium concentrate. Pet.App.351a. Fully ***94%*** of that uranium was imported from foreign countries, and approximately 40% came from Russia, Uzbekistan, and Kazakhstan alone. *Id.* at 352a. By comparison, net imports of petroleum in 2015 accounted for just 24% of domestic petroleum consumption in the United States. *See Oil: Crude and Petroleum Products Explained*, U.S. Energy Information Admin., http://bit.ly/2qcZOQM (last updated May 8, 2017).

As these figures illustrate, domestic uranium production is low. In fact, it is "near historic lows" since the atomic era began in the 1940s. *U.S. Uranium Production Is Near Historic Low As Imports Continue To Fuel U.S. Reactors*, U.S. Energy Info. Admin.: Today in Energy (June 1, 2016), http://bit.ly/2mDoHGC. In 1980, the United States produced nearly 45 million pounds of uranium concentrate. *Id.* In 2016, the United States produced fewer than 3 million pounds of uranium concentrate—less than 7% of 1980 production and the lowest output in more than a decade. *See* U.S. Energy Info. Admin. *Domestic Uranium Production Report—Quarterly* (Feb. 10, 2017), http://bit.ly/2pDNM1A. In fact, the United States has not produced more than 5 million pounds of

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[2] Citations to "CA4 JA" refer to the Joint Appendix filed in the Fourth Circuit.

uranium concentrate in any of the past 20 years. *Id.* at 2.

As a result of the nearly historical low domestic production of uranium, the continued viability of nuclear energy in the United States—responsible for one-fifth of the Nation's electricity supply—is presently almost entirely dependent on imports from foreign countries, with a large percentage coming from countries in the former Soviet Union. As many U.S. government officials have lamented, that poses a threat both to the Nation's economic well-being and to its national security. *See, e.g.*, Pet.App.381a (Statement of Sen. Portman) ("[t]here's no question" that "being reliant on foreign countries including Russia for uranium" is "a national security issue"); *id.* at 383a (Statement of Sen. Barraso) (noting that uranium development provides "good paying jobs for American[s]" and suggesting that dependence on foreign uranium presents a national security risk); *id.* at 384a (Statement of now-Nuclear Regulatory Commission Chairman Macfarlane) ("Certainly, it's important for the United States to have a diverse supply of energy as possible and to have as much domestic supply as possible as well."); *id.* at 388a (Statement of Sen. Cassidy) (noting that dependence on foreign uranium is "of incredible importance to our national security and to our energy security"). In short, domestic uranium production and supply is an issue of surpassing importance to the economy and security of our Nation.

II. The Decision Below Has Far-Reaching Consequences For The Future Of Nuclear Power In The United States.

The decision below has considerable implications for the nuclear power industry and the Atomic Energy Act. At the outset, this case alone will have a significant impact on the nuclear energy industry, as it concerns the single "largest natural deposit of uranium in the United States and one of the largest in the world." Pet.App.201a. The Coles Hill deposit contains an estimated 119 million pounds of uranium ore. *Id.* It is thus no exaggeration to say that allowing Virginia's ban on mining the deposit to stand will have a massive impact on the entirety of the Nation's nuclear power industry. And the impact is even more profound for Virginia and its residents, as estimates suggest that mining the Coles Hill deposit could "generate $4.8 billion of net revenue for Virginia businesses." *Id.* at 202a.

But the decision below also has far broader implications, as it guts the Atomic Energy Act of a key aspect of its preemptive force. As this Court has made clear, "the pre-empted field" under the Act is defined, "in part, by ... the *motivation* behind the state law"—specifically, whether it is animated by concerns about radiological safety. *English*, 496 U.S. at 84 (emphasis added); *see also PG&E*, 461 U.S. at 213 (finding it "necessary to determine whether there is a non-safety rationale" for state's nuclear power plants moratorium). That is clear on the face of the statute. Not only does the Act give the federal government the power to regulate nuclear power plants and the antecedent activities of uranium

"milling" (*i.e.*, the extraction of uranium from ore) and "tailings management" (*i.e.*, the safe handling of radioactive waste products generated by uranium milling).[3] *See, e.g.*, 42 U.S.C. §§2111(a), 2014(e)(2), 2133; 10 C.F.R. pt. 40, app. A. The Act also expressly provides that states retain the power to regulate nuclear energy-related activities only "for purposes *other than protection against radiation hazards.*" 42 U.S.C. §2021(k) (emphasis added).

To be sure, as this Court recognized in *PG&E*, that means that states may still regulate aspects of the nuclear industry for reasons *other than* safety concerns, such as economic concerns. But "a state judgment that nuclear power is not safe enough to be further developed would conflict directly with the countervailing judgment" of Congress. *PG&E*, 461 U.S. at 213. Simply put, "the federal government has occupied the entire field of nuclear safety concerns, except the limited powers expressly ceded to the states." *Id.* at 212. Accordingly, any state statute "grounded in [radiological] safety concerns falls squarely within the prohibited field" occupied by the federal government and is preempted. *Id.* at 213; *accord* Brief for the United States as *Amicus Curiae* at 11, *Nielson v. Private Sector Fuel Storage, LLC* (No. 04-575) (Nov. 2005) ("[T]he AEA preempts *any*

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[3] As Judge Traxler explained in dissent below, "[t]he Act did not seek to regulate conventional uranium mining on nonfederal lands ... because Congress did not perceive that mining itself posed serious radiological risks." Pet.App.25a n.5 (citing S. Rep. No. 79-1211, at 18-19 (1946); Atomic Energy: Hearings Before the Committee on Military Affairs on H.R. 4280, 79th Cong. 125 (1945)). As soon as radiological risks are presented, however, federal regulation begins.

state legislation that falls within 'the field of nuclear safety concerns.'" (quoting *PG&E*, 461 U.S. at 212-13)).

That should have made this an easy case. Virginia does not contest (and cannot contest, at this motion to dismiss stage) that it banned uranium mining at Coles Hill out of safety concerns about potential radiological hazards. The ban thus "conflict[s] directly with the countervailing judgment" of Congress. *PG&E*, 461 U.S. at 213. Yet the Fourth Circuit inexplicably concluded that petitioners' preemption claim failed *as a matter of law*, because the court "decline[d] the invitation" to "look past the statute's plain meaning to decipher whether the legislature was motivated to pass the ban by" concerns that Congress has reserved to the federal government alone. Pet.App.14a. Thus, in the Fourth Circuit's view, a state may legislate with the admitted purpose of preventing the very activities that Congress enacted the Atomic Energy Act to encourage, so long as it does not say on the face of its statute that it is doing so.

That holding is impossible to reconcile with this Court's decisions in *PG&E* and *English*, both of which confirm that the Atomic Energy Act demands the very motivation-based inquiry that the Fourth Circuit "declined" to undertake. *See, e.g.*, *PG&E*, 461 U.S. at 213; *English*, 496 U.S. at 84. It also squarely conflicts with decisions from other circuits following this Court's command that state legislation has no force or effect when its "purpose" is to guard against the same radiation hazards that Congress has given the federal government the exclusive power to

regulate. *See, e.g.*, *Entergy Nuclear*, 733 F.3d at 415-23; *Skull Valley*, 376 F.3d at 1247-48. Left standing, the decision below thus not only will preclude mining at the Nation's single largest uranium deposit based on judgments that Congress has decided are not for Virginia to make, but will serve as an invitation to other states to try to countermand the critically important interests that the Atomic Energy Act serves.

III. The Decision Below Provides A Roadmap For State And Local Governments To Evade The Preemptive Force Of Federal Law.

The square conflict between the decision below and decisions from this Court and other circuits is reason enough to grant certiorari. But the decision below threatens consequences far beyond the Atomic Energy Act, as it provides a roadmap to other states seeking to evade the preemptive force of all manner of federal statutes.

As this Court has admonished time and again, it is the substance of a state law, not its form, that controls the preemption inquiry. *See, e.g.*, *Aetna Health Inc. v. Davila*, 542 U.S. 200, 214-15 (2004); *Howlett By & Through Howlett v. Rose*, 496 U.S. 356, 382-83 (1990); *Allis-Chalmers Corp. v. Lueck*, 471 U.S. 202, 211 (1985). States thus cannot evade the Supremacy Clause through the simple expedient of labeling their laws something other than what they are. To be sure, in many preemption cases, the substantive inquiry turns on the *effect* of a state law, not its purpose. But when Congress chooses, as it did in the Atomic Energy Act, to define "the pre-empted field, in part, by ... the motivation behind the state

law," *English*, 496 U.S. at 84, then courts must look beyond labels and form to determine the purpose behind the challenged law. Otherwise, states could avoid preemption merely by declining to make their true motivations explicit—as Virginia has now succeeded in doing here.

Of course, a purpose-based preemption inquiry will not always be an easy one. But it certainly is not a difficult question in this case. Not only has the state never denied that it banned mining at Coles Hill for precisely the reasons that Congress has reserved to the federal government; it also does not dispute that the "legislature banned uranium mining *only as a means to prevent milling and tailings management from occurring* in Virginia," Pet.App.26a-27a (emphasis added)—two activities that even the majority acknowledged may be regulated only by the federal government, *see id.* at 12a-13a. Yet the court nonetheless refused to hold the state's ban preempted, simply because the "the plain language of the ... ban *does not mention* uranium milling or tailings storage." *Id.* at 14a (emphasis added). In other words, under the Fourth Circuit's view, a state is free to countermand federal regulation to its heart's content, so long as it is smart enough not to "mention" preempted fields on the face of its law.

That reasoning poses a threat not just to the Atomic Energy Act, but to all manner of federal statutes. The Supremacy Clause would be rather meaningless if states could sidestep preemption through the simple expedient of including or omitting magic words in their legislation. Yet that is precisely

the result that the decision below countenances. So long as a state "does not mention" on the face of its law its intent to target an area reserved by Congress to the federal government, the Supremacy Clause can be evaded. Indeed, the Fourth Circuit allowed Virginia's ban to escape preemption even though the state *admits* that it rests on a judgment that nuclear fuel is not safe enough due to purported radiological safety concerns—a judgment that "conflict[s] directly with the countervailing judgment" of Congress to prohibit states from substituting their own judgments about radiological safety for those of the federal government. *PG&E*, 461 U.S. at 213.

Left standing, that decision not only will invite other states to impede Congress' efforts to encourage domestic uranium mining, but will invite states and local governments to engage in more of the same clever labeling and workarounds that this Court repeatedly has held cannot suffice to evade the Supremacy Clause. *See, e.g.*, *Nat'l Meat Ass'n v. Harris*, 565 U.S. 452, 463-64 (2012) (state could not avoid federal meat inspection laws by prohibiting sale of meat that did not satisfy state's own conditions); *Haywood*, 556 U.S. at 742 (state could not immunize its correction officers from section 1983 money damages suits by divesting state courts of jurisdiction over such suits); *Engine Mfrs. Ass'n v. S. Coast Air Quality Mgmt. Dist.*, 541 U.S. 246 (2004) (state could not avoid federal regulation of vehicle manufacturing by requiring purchasers to purchase only vehicles that complied with state's manufacturing preferences). Accordingly, the Court should grant certiorari to resolve the circuit split that

the decision below creates and restore the full preemptive force of the Atomic Energy Act.

CONCLUSION

For the foregoing reasons, this Court should grant the petition for certiorari.

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VIRGINIA URANIUM, INC., *et al.*,
Petitioners,

v.

JOHN WARREN, *et al.*,
Respondents.

On Petition for a Writ of Certiorari to the United States Court of Appeals for the Fourth Circuit

BRIEF OF SENATOR TOM COTTON, SENATOR JIM INHOFE, AND SENATOR TED CRUZ AS *AMICI CURIAE* IN SUPPORT OF PETITIONERS

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INTEREST OF *AMICI*[1]

Amici curiae are three currently serving United States Senators, with distinct interests in the national security and federalism issues presented by this case. Specifically, *amici* have an interest in the proper interpretation of the Atomic Energy Act's preemptive scope, to ensure that local interests do not circumvent federal priorities on issues of national security. Domestically produced nuclear material is one such issue. Not only is it critical to the Nation's security and defense strategy, it also affects the United States' status as an independent and forward-looking leader on the global stage. *Amici's* experience make them uniquely situated to address the strategic importance of national nuclear policy. Moreover, *amici* are responsible for developing legislation relating to nuclear policy and thus have a vested interest in ensuring that federal law is both respected and effectuated.

Senator Tom Cotton represents the State of Arkansas and serves on the Senate Committee on Armed Services and the Senate Select Committee on Intelligence. His assignments grant him a distinct perspective on the need for nuclear material relative to military defense and readiness in today's geopolitical climate. Thus, he is acutely aware of the risks in failing to fully meet that need.

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[1] No counsel for a party authored this brief in whole or in part, and no party or counsel for a party made a monetary contribution intended to fund the preparation or submission of this brief. No one other than *amici curiae*, its members, or its counsel made a monetary contribution to the preparation or submission of this brief. Counsel for *amici curiae* timely contacted counsel for all parties, who provided consent to the filing of this brief.

Senator Jim Inhofe represents the State of Oklahoma and serves on the Senate Committee on Armed Services. He also chairs the Subcommittee on Readiness and Management Support. In that capacity, Senator Inhofe is responsible for overseeing policy relating to military readiness and construction, defense energy and environmental programs, and conventional ammunition procurement. Senator Inhofe has a particular interest in the role nuclear energy plays in defense readiness.

Senator Ted Cruz represents the State of Texas and serves on the Senate Committee on Armed Services. As part of his work on that Committee, Senator Cruz is responsible for advancing policy related to the Department of Defense, military research and development, and nuclear energy. Senator Cruz has long been an advocate for a strong and cohesive national defense.

As part of their service on the Committee on Armed Services, *amici* are also members of the Subcommittee on Strategic Forces. The Subcommittee on Strategic Forces is responsible for overseeing policy on nuclear and strategic forces, nuclear defense, defense environmental management programs, and arms control and non-proliferation programs. The subcommittee also has oversight over several agencies that are devoted to nuclear safety and defense. Accordingly, *amici* are intimately familiar with the very issues that drove Congress to first delineate responsibility for nuclear safety among the federal government and the states, and *amici* continue to work on those issues committed to the federal government by the Atomic Energy Act.

In light of their collective experiences and perspectives, *amici* agree that national interests require the Atomic Energy Act's jurisdictional balance be re-

spected. Because the decision below disrupts that balance, thereby jeopardizing national interests, *amici* agree with Petitioners that the Court should grant the writ.

INTRODUCTION

The Atomic Energy Act ("the Act") and its many amendments memorialize Congress's cumulative attempt to grapple with the military, political, social, and economic consequences of harnessed nuclear power and to allocate responsibility for those consequences within a legislative and regulatory framework.

Initially, "the development of nuclear power [was] a Government monopoly," *Duke Power Co.* v. *Carolina Envtl. Study Grp., Inc.*, 438 U.S. 59, 63 (1978), responsibility for which was vested in the civilian-led Atomic Energy Commission ("the Commission").[2] However, within just a few years, Congress recognized the value in private-sector involvement, and, in 1954, amended the Act to permit private ownership and development of nuclear power under the Commission's watchful eye.

But in opening the nuclear energy industry to private ownership and development, Congress also opened the door to state regulation over those private enterprises. Confusion soon erupted over the permissible extent and manner of state regulation, with many states ill-equipped to take the reins. To resolve this jurisdictional crisis, Congress amended the 1954 Act to delineate federal and state responsibilities.

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[2] The Energy Reorganization Act of 1974, 42 U.S.C. § 5801 *et seq.*, abolished the Atomic Energy Commission and transferred its regulatory functions to the Nuclear Regulatory Commission. References to "the Commission" shall refer to both agencies.

Specifically, Congress crafted an agreement-based scheme whereby the Commission could transfer certain regulatory functions to the states. The framework, which remains in place today, reflects congressional determination as to which responsibilities may safely be transferred to state or local authorities and which must remain in the care of the Commission.

The Commonwealth of Virginia's ban on uranium *mining* purports to regulate an activity properly within the Commonwealth's jurisdiction. However, in purpose and effect, the ban targets activities (uranium *milling* and *tailings* storage and management) reserved exclusively for regulation by the Commission. Pursuant to this Court's precedents, which turn on the motivation and effect of the statute vis-à-vis radiological safety, the ban is preempted by the Act. The same is true under the Second and Tenth Circuits' approaches in applying those precedents. However, by refusing to look beyond the plain language of the ban and by willfully blinding itself to the ban's purpose, the Fourth Circuit disregarded this Court's teachings and departed from the approach of its sister circuits, creating a split in circuit authority.[3] In so doing, the decision upends the Act's jurisdictional balance without considering the national and international consequences that flow from the military, political, and economic interests at stake.

The Fourth Circuit's failure to heed traditional principles of preemption threatens the establishment of uniform federal policy over a strategic national resource at a critical time. The domestic production and development of uranium is foundational to the Nation's security, but the domestic industry is not

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[3] The Petition addresses in detail the split in circuit authority and *amici* do not repeat the argument here.

currently capable of meeting those needs fully. Moreover, the decision below affects not only uranium production and development but *all* activities under the Commission's exclusive jurisdiction. It thus carries far-reaching and serious risks should the decision stand.

Accordingly, *amici* urge the Court to grant Petitioners' writ.

THE FOURTH CIRCUIT'S ERRONEOUS INTERPRETATION AND APPLICATION OF THE ACT'S PREEMPTION FRAMEWORK AFFECTS ISSUES OF NATIONAL IMPORTANCE THAT WARRANT GRANTING OF THE WRIT.

A. The Act's Preemption Framework Reflects Congress's Careful Determination Of Federal And State Competencies Balanced Against Federal And State Interests.

The history of the development of nuclear energy and technology is uniquely federal in nature. While the atomic bomb dramatically illuminated the military and political implications of atomic energy, the role atomic energy would come to play upon civilian life was less clear. Congress struggled to develop a legislative framework capable of handling atomic energy's unique policy issues. *See, e.g.*, Byron S. Miller, *A Law is Passed — The Atomic Energy Act of 1946*, 15 U. Chi. L. Rev. 799 (1948). Reflecting Congress's then-judgment that the federal government was the only body prepared to address these policy issues, the inaugural 1946 version of the Act monopolized nuclear energy under federal authority by way of the Commission. The 1946 Act further declared a national policy — "subject at all times to the paramount objective of assuring the common defense and securi-

ty" — to direct efforts toward "improving the public welfare, increasing the standard of living, strengthening free competition in private enterprise, and promoting world peace." The Atomic Energy Act of 1946, ch. 724, § 1, 60 Stat. 755, 756.

Within a decade, however, Congress "concluded that the national interest would be best served if the Government encouraged the private sector to become involved in the development of atomic energy for peaceful purposes under a program of federal regulation and licensing." *Duke Power Co.*, 438 U.S. at 63. The Atomic Energy Act of 1954 encouraged private development "by opening the door to private construction, ownership, and operation of commercial nuclear-power reactors under the strict supervision of the [Commission]." *English* v. *Gen. Elec. Co.*, 496 U.S. 72, 81 (1990).

Termination of the federal monopoly on the ownership and development of nuclear energy confronted states with a variety of potential health and environmental hazards that they had previously been precluded from regulating. *Federal-State Relationships in the Atomic Energy Field: Hearings Before the Joint Comm. on Atomic Energy*, 86th Cong. 25 (1959) ("*Hearings*"). Consequently, there was a concerted effort between federal and state agencies to cooperate in regulating those hazards, with the federal government providing extensive assistance in the form of information-sharing, training, funding, and model regulations and standards. *Id.* at 25-26.

Nonetheless, there became evident a "need for clarification of the responsibilities of the Federal and State Governments for regulating atomic energy." *Id.* at 26; *see also*, *id.* at 393. Two competing considerations drove the uncertainty as to which government was properly responsible for nuclear hazards. On the

one hand, providing for the welfare and public health of its citizens had traditionally fallen within the states' core police powers. *Id.* at 20, 274, 289. Conversely, many questioned the legal enforceability of any state regulation on the subject. As an initial matter, "the 1954 act set[ ] forth a directive to the Federal agency to adopt a comprehensive scheme of regulations," and courts frequently treated such direction as preempting any corresponding state regulation. *Id.* at 126. Moreover, "under the act, the objectives of Federal regulations are to assure protection of the public while not unduly burdening industrial progress, and thus more restrictive requirements by the State might be deemed as interference with national nuclear development policy." *Id.*

Federal, state, and industry officials near universally agreed on the need for clarification as to the extent of state authority over nuclear energy. How much and which types of authority were more hotly debated, complicated by the fact that then-existing state efforts and competencies were far from uniform. *See, id.* at 127-30, 131, 394.

An early bill drafted by the Commission "provided for the exercise of dual or concurrent jurisdiction by both the [Commission] and the States over activities licensed by the Commission." *Id.* at 27. To minimize "inconsistency," the proposed bill excluded licensing responsibilities already exercised by the Commission and provided that state requirements "may not be 'in conflict with' those adopted by the Commission." *Id.* at 290. However, the notion of concurrent jurisdiction elicited concerns over duplication of efforts, industry burden from conflicting and overlapping requirements, and which government would prevail in the event of conflicting standards or decisions, particularly as it came to overregulation. *Id.* at 20, 120,

129, 131, 174. Consequently, shared federal and state jurisdiction over radiological safety was rejected. *Id.* at 290.

Instead, Congress

> provide[d] a statutory framework within which the States may assume an independent regulatory role in extensive areas now occupied by the Atomic Energy Commission on a basis which will assure appropriate protection for public health and safety and compatibility between the regulatory programs of the States and those of the Commission.

Id. at 290. Specifically, the legislation empowered the Commission to enter into agreements with state governors to transfer responsibilities from the Commission to the states upon a finding by the Commission that the state has an adequate program in place to appropriately regulate the material. S. Rep. No. 86-870, at 11 (1959).

Certain regulatory responsibilities, because of their nature, were excepted from the Act's agreement-transfer scheme. The federal government retained exclusive jurisdiction over "areas in which the technical safety considerations are of such complexity that it is not likely that any State would be prepared to deal with them during the foreseeable future," as well as those "areas as to which interstate, national, or international considerations seem to be paramount." *Hearings* at 291. Also excepted were activities associated with high levels of radioactive hazards. *Id.* As reported by the Joint Committee on Atomic Energy: "These are areas which, because of their special hazards, or for reasons of Federal responsibility, are believed desirable for continued re-

sponsibility by the Commission." S. Rep. No. 86-870, at 10.

With regard to those responsibilities that may be devolved to the states, once an agreement is established, the Act provides that, "[d]uring the duration of such an agreement . . . the State shall have authority to regulate the materials *covered by the agreement* for the protection of the public health and safety from radiation hazards." 42 U.S.C. § 2021(b) (emphasis added). Otherwise, state and local authorities were, and are still, free "to regulate activities for purposes *other than* protection against radiation hazards." *Id.* § 2021(k). In other words, "State laws and regulations concerning the control of radiation hazards from byproduct, source, and special nuclear materials shall not be applicable except pursuant to an agreement entered into with the Commission."[4] *Hearings* at 488-89; *see also* S. Rep. No. 86-870, at 12 ("As indicated elsewhere, the Commission has exclusive authority to regulate for protection against radiation hazards until such time as the State enters into an agreement with the Commission to assume such re-

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[4] This language originally appeared in one of the near-final proposed bills, but was subsequently removed "as unnecessary," because "[w]ith or without this sentence, in order for a State to so regulate or license [materials under the Act] it must first establish an adequate program for this purpose and enter into an agreement with the Commission." S. Rep. No. 86-870, at 3. The removal was "*not* intend[ed] to change the substantive effect of the bill" and was "*not* intend[ed] to leave any room for the exercise of concurrent jurisdiction by the States to control radiation hazards." *Hearings* at 500 (emphases added). Rather, it meant to provide courts with "greater latitude in sustaining certain types [of laws, (*e.g.*, zoning requirements)] which have *purposes other than control of radiation hazards*, even though such requirements might have an *incidental* effect upon the use" of material licensed by the Commission. *Id.* (emphases added).

sponsibility."); S. Rep. No. 86-870, at 3 ("[I]n order for a State to so regulate or license [materials covered by the Act], it must first establish an adequate program for this purpose and enter into an agreement with the Commission.").

The Act's legislative history demonstrates the careful consideration with which the Committee allocated federal and state responsibilities for nuclear safety. In so doing, the Committee considered both the competencies of the states as well as the national or international implications or complications that may flow from an activity regulated by the Act. Truly local concerns in the way of traditional public health and safety were left to the province of the states while issues of federal significance, including those highly technical and highly hazardous activities, were committed exclusively to the Commission's control. For those regulatory aspects that could potentially be transferred to the states, the federal government assumed responsibility for supervising that transition, including satisfying itself that the state has in place a regulatory scheme that both adequately protects against radiological harms *and* meets federal expectations for achieving the purposes of the 1954 Act — namely, the private development and use of nuclear energy for peacetime purposes, subject to the national interest in common defense and security, *see* 42 U.S.C. § 2011; S. Rep. No. 83-1699, at 3, 4 (1954).

B. The Fourth Circuit's Misinterpretation Of The Act's Preemptive Scope Upsets The Federal/State Jurisdictional Balance And Permits State And Local Governments To Override The Federal Government On Issues Of National Importance.

"[T]he federal government has occupied the entire field of nuclear safety concerns, except the limited powers expressly ceded to the States." *Pac. Gas & Elec. Co.* v. *State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 212 (1983). In line with traditional tenets of preemption that look to "whether 'the matter on which the State asserts the right to act is in any way regulated by the Federal Act,'" *id.* at 213 (quoting *Rice* v. *Santa Fe Elevator Corp.*, 331 U.S. 218, 236 (1947)), "the Court defined the pre-empted field, in part, by reference to the motivation behind the state law," *English*, 496 U.S. at 84. The remaining "part of the field is defined by the state law's actual effect on nuclear safety." *Id.* In other words, "state regulation of matters directly affecting" aspects of radiological safety committed exclusively to the federal government could also impermissibly intrude upon the preempted field. *Id.*

Taken together, and contrary to the Fourth Circuit's conclusion, this Court has made clear that the preemptive scope is not limited to the "plain language" of the challenged statute. *Contra* Pet. App. 14a-18a. Two other Circuit Court of Appeals that have addressed this issue have reached the same conclusion. *See Entergy Nuclear Vt. Yankee, LLC* v. *Shumlin*, 733 F.3d 393 (2d Cir. 2013); *Skull Valley Band of Goshute Indians* v. *Nielson*, 376 F.3d 1223 (10th Cir. 2004). The *Entergy* court explicitly noted that their "inquiry does not end at the text of the

statute." *Entergy Nuclear Vt. Yankee*, 733 F.3d at 416. And in *Skull Valley*, the Tenth Circuit went beyond the plain language of statutory provisions that transferred control from local to state authority of highways surrounding a spent nuclear fuel storage facility and that also required state approval prior to granting any right of way to companies engaged in the transportation or storage of spent nuclear fuel. *Skull Valley*, 376 F.3d at 1252-53. On the extra-textual record, the Tenth Circuit agreed with the district court that the provisions were enacted for reasons of radiological safety. *Id.*

There is sound reason for pulling back the curtain in these cases. In preempting a field of regulation, Congress has determined that an area of law is of such significance or national import that the field must be governed by a single, national policy for which state or local authorities may not substitute their own judgments. State or local authorities are not permitted to wordsmith their way around Congress's determination. *Cf. Entergy Nuclear Vt. Yankee*, 733 F.3d at 416 (explaining that courts do not "blindly accept the articulated purpose . . . for preemption purposes," because that would permit states to "nullify nearly all unwanted federal legislation" (quoting *Greater N.Y. Metro Food Council, Inc.* v. *Giuliani*, 195 F.3d 100, 108 (2d Cir. 1999)).

But by refusing to look past the plain language of a statute or regulation, the Fourth Circuit has given state and local authorities carte blanche to override federal policy concerning nuclear material and radiological hazards, so long as the pertinent language does not purport to regulate an activity under the Commission's exclusive jurisdiction. The Fourth Circuit's decision thus risks state subversion of an important national policy. The danger is particularly

acute here given the public penchant to stigmatize localities hosting nuclear facilities or to otherwise perceive the development of nuclear energy as unsafe, all out of fear regarding radiological hazards emanating from nuclear waste. *See, e.g.*, M.V. Ramana, *Nuclear power and the public*, 67 Bull. of the Atomic Scientists, July 1, 2011, at 43-51. Public hostility is frequently manifested in state or local laws that attempt to dismantle what the federal government has already approved. *See, e.g.*, *Skull Valley*, 376 F.3d at 1227-30 (describing state regulations enacted to prevent a spent nuclear fuel storage facility from becoming operational). Indeed, local concern regarding the radiological hazards associated with the processing of uranium and subsequent storage of nuclear waste has sustained Virginia's ban on uranium mining since its inception.[5]

The impact of the holding below is not limited just to the domestic production of uranium. The Fourth Circuit's rubberstamp approach would apply to *all* state legislation or regulations challenged under the Act. As a result, state and local authorities could un-

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[5] *See, e.g.*, Pet. App. 239a-297a; Associated Press, *Proposed East Coast Uranium Mine Dividing Va.*, USA Today (Jan. 26, 2013), https://www.usatoday.com/story/news/nation/2013/01/26/virginia-uranimum-mine/1866489/; Jonathon Wilson, *Rural Community Debates Pros and Cons of Uranium Mining*, WAMU (Mar. 29, 2013), http://wamu.org/story/13/03/29/rural_community_debates_pros_and_cons_of_uranium_mining/; Ana Komnenic, *Amid Fierce Political Opposition, US Uranium Miner Suspends Mine Plans*, Mining.com (Dec. 15, 2013), http://www.mining.com/amid-fierce-political-opposition-us-uranium-miner-gives-up-on-one-of-the-worlds-largest-uranium-deposits-66417/; KTAR Newsroom, *Drive to Mine Uranium in Va. Comes to Quiet Pause*, KTAR News (Dec. 14, 2013), http://ktar.com/story/112903/drive-to-mine-uranium-in-va-comes-to-quiet-pause/.

dermine federal policy on a host of nuclear-related issues by indirectly regulating activities over which the Commission retains exclusive jurisdiction. The intrusion becomes even more concerning given that the Act's preemptive boundaries reflect Congress's and the Commission's judgments as to which radiological activities and associated hazards fall within state and local competencies. The remaining activities and hazards are beyond the states' capabilities such that they require explicit Commission approval for transfer or are not eligible for transfer in the first instance. *See Silkwood* v. *Kerr-McGee Corp.*, 464 U.S. 238, 250 (1984) (explaining that the division of authority between state and federal government was premised on technical competency). The deliberateness with which Congress divided responsibilities under the Act, coupled with the importance of the subject-matter regulated by the Act necessitate intervention by this Court.

C. The Development And Availability Of Nuclear Material, Including The Domestic Production Of Uranium, Is A National Strategic Interest Congress Sought To Protect.

As Judge Traxler observed in his dissent below, "[t]he stakes in this case are significant." Pet. App. 21a. *Amici*, as sitting Senators and members of the Senate Committee on Armed Services — including the subcommittee charged with overseeing nuclear defense policy — are uniquely situated to speak to those stakes.

Foremost, the availability and development of uranium, and particularly, the *domestic production* of uranium, is integral to the Nation's security. United States treaty obligations require uranium used for defense purposes to be met "*only* with enriched ura-

nium produced by and procured from domestic sources using U.S. enrichment technology." George David Banks & Michael Wallace, Ctr. for Strategic & Int'l Studies, *Recapturing U.S. Leadership in Uranium Enrichment* 5 (Nov. 2013). Because of this requirement, the United States is not currently capable of generating any enriched uranium to legally use for defense purposes.

Although a priority at the height of the Cold War, domestic production of uranium faltered under market costs resulting from heavily subsidized European enriched uranium and the importation of enriched uranium from Russia pursuant to the Megatons to Megawatts program.[6] *Id.* at 2. In 2016, domestic production of uranium concentrate came from just seven facilities in three states, and was the lowest annual domestic production since 2005 and 13% lower than the output from the prior year. U.S. Energy Info. Admin., *U.S. Uranium Production Lowest Since 2005*, Today in Energy (Feb. 16, 2017), https://www.eia.gov/todayinenergy/detail.php?id=29992. The increasingly diminished output runs counter to the congressional goal of encouraging the domestic production of mining in service to the national defense. *See* 42 U.S.C. §§ 2296b-3(a), -6(a)-(b).

There is also only a single remaining enrichment plant in the United States, which is European-owned and uses foreign-origin enrichment technology and therefore cannot supply enriched uranium for defense

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[6] From 1994 through 2013, nearly half of the uranium used domestically came from Russia. World Nuclear Ass'n, *US Nuclear Fuel Cycle* (last updated May 8, 2017), http://www.world-nuclear.org/information-library/country-profiles/countries-t-z/usa-nuclear-fuel-cycle.aspx.

purposes.[7] Banks & Wallace, *supra*, at 3. While experts suggest that the United States has sufficient high-enriched uranium and depleted material to meet defense needs for the foreseeable future, they note that stockpiles of low-enriched uranium, used to produce the quick-decaying tritium that is essential for several military applications, are far more limited. *Id.* at 8-9. Although high-enriched uranium can be downblended to produce low-enriched uranium, because the United States "no longer has any capacity to produce [high-enriched uranium] to replace consumed material," the availability of high-enriched uranium for this purpose is unknown, and most high-enriched stocks "are reserved primarily for defense program strategic reserves and for production of fuel for the U.S. Navy." *Id.* at 9.

Moreover, the demand for high-enriched uranium is about to surge, likely further depleting current stores. The navy has emphasized an increased focus on patrolling the world's oceans and various waterways as critical to maintaining the Nation's security interests. *See* CBS News, *Inside the U.S. Navy's Newest Fastest Submarines* (May 10, 2017), http://www.cbsnews.com/news/us-navy-newest-submarine-squad-virginia-class/. And an executive program to build a brand new fleet of nuclear submarines has previously been approved, Anthony Capaccio, *Fleet of 12 Nuclear Submarines in Line for Pentagon Approv-*

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[7] A demonstration plant, American Centrifuge, was intended to develop new U.S. technology for enrichment but the Department of Energy cut all funding for the plant in September 2015, and the plant demobilized shortly thereafter. *See* World Nuclear News, *American Centrifuge Demonstration Plan Completes Operations* (Feb. 22, 2016), http://www.world-nuclear-news.org/C-American-Centrifuge-demonstration-plant-completes-operations-2202167.html.

al, Bloomberg (Jan. 4, 2017), https://www.bloomberg.com/news/articles/2017-01-05/new-nuclear-armed-subs-win-pentagon-approval-before-obama-leaves, and garners significant support from *amici* and other members of the Committee on Armed Services. The ability to quickly expand any nuclear fleet is constrained, in part, by the ability of nuclear fuel producers to ramp up the supply of fuel. *See* Reuters, *Trump's Navy Warship Expansion Plan Faces Major Obstacles*, Newsweek (Mar. 20, 2017), http://www.newsweek.com/donald-trump-navy-warships-navy-expansion-571281.

The limited availability of home-grown enriched uranium also damages the United States' credibility as a world leader in non-proliferation policy. Any nuclear fuel developed from and by U.S. technology entitles the United States to control all subsequent use of that fuel. Banks & Wallace, *supra*, at 10. To prevent foreign powers from developing their own enrichment technology, ostensibly for peaceful purposes, the United States has, previously, sold those countries the uranium, already enriched, with the condition that it be used solely for peaceful purposes. *Id.* With the loss of U.S. market power, however, the United States' negotiating leverage is also greatly diminished and the United States must now rely on foreign powers such as France and Russia to fill the gap. *Id.* at 10-11.

In addition to military and defense concerns, there are also significant economic and geopolitical interests at stake. Domestic mining makes up just a small fraction of the fuel used in domestic reactors. In fact, 94% of the uranium used in domestic nuclear plants is imported, 37% of which comes from Russia, Kazakhstan, and Uzbekistan. U.S. Energy Info. Admin., *Uranium Marketing Annual Report*, Nuclear & Ura-

nium (May 24, 2016), https://www.eia.gov/uranium/marketing/.

Because the United States is the world's largest producer of nuclear energy, World Nuclear Ass'n, *Nuclear Power in the USA* (last updated May 16, 2017), http://www.world-nuclear.org/information-library/country-profiles/countries-t-z/usa-nuclear-power.aspx, the gap between what domestic uranium producers can deliver against what domestic reactors require results in an unrealized domestic economic benefit that is instead exported to countries such as Russia, Kazakhstan, and Uzbekistan. *See also* World Nuclear Ass'n, *US Nuclear Fuel Cycle*, *supra* (noting that, "[t]he USA has nuclear fuel production capacity insufficient for domestic needs").

The nearly complete reliance on uranium imports not only denies the domestic uranium industry important economic benefits, it also permits foreign countries to influence the United States' ability to ramp up nuclear production or to leverage their uranium production as a political bargaining chip. The dangers that come with dependency underscore the need for energy security in a time of increased global tension. *Amici* support the prudent development of U.S. natural resources to secure U.S. interests and insulate the Nation from undue external influence. The current administration has also signaled that energy security is a vital component of the Nation's geopolitical security. *See, e.g.*, Presidential Executive Order on Promoting Energy Independence and Economic Growth (Mar. 28, 2017), https://www.whitehouse.gov/the-press-office/2017/03/28/presidential-executive-order-promoting-energy-independence-and-economi-1. Domestic production of energy sources is likely to be a key component of that platform.

Experts also predict "a significant expansion of global nuclear power," with China, India, and Russia making up nearly 40% of the world's fleet of nuclear reactors by 2030. Banks & Wallace, *supra*, at 11; *see also*, U.S. Energy Info. Admin., *China Expected to Account for More than Half of World Growth in Nuclear Power Through 2040*, Today in Energy (Sept. 28, 2016). With this expansion will likely come increased fuel costs as domestic owners and operators compete with new foreign entrants. Banks & Wallace, *supra*, at 11. Notably, in the last six years, five nuclear plants have closed, with their owners citing economic reasons as the cause. U.S. Energy Info. Admin., *Fort Calhoun Becomes Fifth U.S. Nuclear Plant to Retire in Past Five Years*, Today in Energy (Oct. 31, 2016). Several other plants have announced retirement plans in the near future, many well before the plants' scheduled license expiration. *Id.* A decrease in domestic supply of nuclear power forces utility companies either to supply energy from a new source or to import electricity from other countries, frustrating national efforts to both reduce energy dependence and encourage the private investment and development of nuclear energy. *Id.*; *see also*, U.S. Energy Info. Admin., *U.S. Nuclear Capacity and Generation Expected to Decline as Existing Generators Retire*, Today in Energy (May 12, 2017), https://www.eia.gov/todayinenergy/detail.php?id=31192.

The declining productivity of domestic nuclear power poses significant strategic risks that threaten this Nation's security. Recognizing and foreshadowing the need for an effective and uniform policy regarding nuclear development, the 1959 amendments to the Act affirmatively removed certain regulatory decisions from the states and committed them exclusively to the judgment of the Commission to allow the fed-

eral government to mitigate and remediate many of these risks. But the Fourth Circuit's needlessly formalistic approach permits states to second-guess federal judgments and undermine national policy through backdoor legislation. This Court and other Circuit Courts of Appeals have established rules to prevent as much; the Fourth Circuit must be realigned to do the same.

CONCLUSION

For the foregoing reasons, the Court should grant Petitioners' writ.

Respectfully submitted,

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No. 16-1275

In The Supreme Court of the United States

VIRGINIA URANIUM, INC., *et al.*,

Petitioners,

v.

JOHN WARREN, *et al.*,

Respondents.

On Writ Of Certiorari To The United States Court Of Appeals For The Fourth Circuit

JOINT APPENDIX

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U.S. District Court
Western District of Virginia (Danville)
CIVIL DOCKET FOR
CASE #: 4:15–cv–00031–JLK–RSB

Virginia Uranium, Inc. et al v. McAuliffe et al
Assigned to: Judge Jackson L. Kiser
Referred to: Magistrate Judge Robert S. Ballou
Case in other court: 16–01005
Cause: 28:1331 Fed. Question

Date Filed: 08/05/2015
Date Terminated: 12/02/2015
Jury Demand: None
Nature of Suit: 950 Constitutional – State Statute
Jurisdiction: Federal Question

Date Filed	#	Docket Text
08/05/2015	1	COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF against Melanie D. Davenport, Michael Dowd, Maurice Jones, Bradley C. Lambert, Terry McAuliffe, David K. Paylor, James P. Skorupa, Conrad Spangler, Molly J. Ward, Robert J. Weld, Justin Williams (Filing & Administrative fee $400.00; receipt number 0423–2282328 paid via pay.gov) filed by Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc., Bowen Minerals, LLC. 100 Day Notice due by 11/13/2015; 120 Day Service due by 12/3/2015. (Attachments: # 1 Exhibit 1, # 2 Exhibit 2, # 3 Exhibit 3, # 4 Exhibit 4,

		# 5 Exhibit 5, # 6 Exhibit 6, # 7 Civil Cover Sheet)(ham)
08/05/2015	2	Positive Corporate Disclosure Statement by Virginia Uranium, Inc. identifying Corporate Parent Virginia Energy Resources, Inc. and Virginia Energy Resources, Inc. identifying Other Affiliate Sprott Resource Corp. & Other Affiliate Energy Fuels, Inc. Negative Corporate Disclosure Statement by Coles Hill, LLC and Bowen Minerals, LLC. (ham)
08/05/2015	3	Proposed Summons by Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc., Bowen Minerals, LLC as to Terry McAuliffe.(Weitzner, Michael)
08/05/2015	4	Proposed Summons by Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc., Bowen Minerals, LLC as to Maurice Jones.(Weitzner, Michael)
08/05/2015	5	Proposed Summons by Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc., Bowen Minerals, LLC as to Conrad Spangler.(Weitzner, Michael)
08/05/2015	6	Proposed Summons by Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc., Bowen Minerals, LLC as to Bradley C. Lambert.(Weitzner, Michael)

08/05/2015	7	Proposed Summons by Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc., Bowen Minerals, LLC as to James P. Skorupa.(Weitzner, Michael)
08/05/2015	8	Proposed Summons by Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc., Bowen Minerals, LLC as to Molly J. Ward.(Weitzner, Michael)
08/05/2015	9	Proposed Summons by Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc., Bowen Minerals, LLC as to David K. Paylor.(Weitzner, Michael)
08/05/2015	10	Proposed Summons by Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc., Bowen Minerals, LLC as to Robert J. Weld.(Weitzner, Michael)
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08/05/2015	13	Proposed Summons by Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc., Bowen

Minerals, LLC as to Justin Williams.(Weitzner, Michael)

08/05/2015 14 Summons Issued as to Melanie D. Davenport, Michael Dowd, Maurice Jones, Bradley C. Lambert, Terry McAuliffe, David K. Paylor, James P. Skorupa, Conrad Spangler, Molly J. Ward, Robert J. Weld, Justin Williams. (Original Summons mailed to counsel for service).(ham)

08/05/2015 15 MOTION for *Charles J. Cooper* to Appear Pro Hac Vice. by Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc.. (Attachments: # 1 Certificate of Good Standing, # 2 Text of Proposed Order)(Weitzner, Michael)

08/05/2015 16 MOTION for *Michael W. Kirk* to Appear Pro Hac Vice. by Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc.. (Attachments: # 1 Certificate of Good Standing, # 2 Text of Proposed Order)(Weitzner, Michael)

08/05/2015 17 MOTION for *John D. Ohlendorf* to Appear Pro Hac Vice. by Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc.. (Attachments: # 1 Certificate of Good Standing, # 2

		Text of Proposed Order)(Weitzner, Michael)
08/06/2015	18	ORDER granting 15 MOTION for *Charles J. Cooper* to Appear Pro Hac Vice. Attorney Charles J. Cooper for Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc. & Virginia Uranium, Inc. added. Signed by Judge Jackson L. Kiser on 8/6/15. (ham)
08/06/2015	19	ORDER granting 16 MOTION for *Michael W. Kirk* to Appear Pro Hac Vice. Attorney Michael W. Kirk for Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc. & Virginia Uranium, Inc. added. Signed by Judge Jackson L. Kiser on 8/6/15. (ham)
08/06/2015	20	ORDER granting 17 MOTION for *John D. Ohlendorf* to Appear Pro Hac Vice. Attorney John D. Ohlendorf for Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc. & Virginia Uranium, Inc. added. Signed by Judge Jackson L. Kiser on 8/6/15. (ham)
08/10/2015	21	SUMMONS Returned Executed by Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc., Bowen Minerals, LLC. Terry McAuliffe served on 8/7/2015, answer due 8/28/2015.(Weitzner, Michael)

08/10/2015	22	SUMMONS Returned Executed by Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc., Bowen Minerals, LLC. Maurice Jones served on 8/7/2015, answer due 8/28/2015.(Weitzner, Michael)
08/10/2015	23	SUMMONS Returned Executed by Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc., Bowen Minerals, LLC. Conrad Spangler served on 8/7/2015, answer due 8/28/2015.(Weitzner, Michael)
08/10/2015	24	SUMMONS Returned Executed by Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc., Bowen Minerals, LLC. Molly J. Ward served on 8/7/2015, answer due 8/28/2015.(Weitzner, Michael)
08/10/2015	25	SUMMONS Returned Executed by Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc., Bowen Minerals, LLC. David K. Paylor served on 8/7/2015, answer due 8/28/2015.(Weitzner, Michael)
08/10/2015	26	SUMMONS Returned Executed by Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc., Bowen Minerals, LLC. Michael Dowd served on 8/7/2015, answer due 8/28/2015.(Weitzner, Michael)
08/10/2015	27	SUMMONS Returned Executed by Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium,

		Inc., Bowen Minerals, LLC. Melanie D. Davenport served on 8/7/2015, answer due 8/28/2015.(Weitzner, Michael)
08/10/2015	28	SUMMONS Returned Executed by Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc., Bowen Minerals, LLC. Justin Williams served on 8/7/2015, answer due 8/28/2015.(Weitzner, Michael)
08/10/2015	29	SUMMONS Returned Executed by Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc., Bowen Minerals, LLC. Bradley C. Lambert served on 8/10/2015, answer due 8/31/2015.(Weitzner, Michael)
08/11/2015	30	SUMMONS Returned Executed by Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc., Bowen Minerals, LLC. James P. Skorupa served on 8/10/2015, answer due 8/31/2015.(Weitzner, Michael)
08/11/2015	31	SUMMONS Returned Executed by Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc., Bowen Minerals, LLC. Robert J. Weld served on 8/6/2015, answer due 8/27/2015.(Weitzner, Michael)
08/25/2015	32	MOTION TO DISMISS FOR FAILURE TO STATE A CLAIM, MOTION to Dismiss for Lack of Jurisdiction by Melanie D. Davenport, Michael Dowd, Maurice Jones,

Bradley C. Lambert, Terry McAuliffe, David K. Paylor, James P. Skorupa, Conrad Spangler, Molly J. Ward, Robert J. Weld, Justin Williams. (Attachments: # 1 Declaration in Support Motion to Dismiss, # 2 Exhibit A – NRC Memorandum, # 3 Exhibit B – NRC Fact Sheet, # 4 Exhibit C – EPA Fact Sheet, # 5 Exhibit D – Report of Secretary of the Commonwealth, # 6 Text of Proposed Order Granting Motion to Dismiss)(Pitchford, Jonathan)

08/25/2015 33 Magistrate Consent Notice to Parties. (ham)

08/25/2015 34 PRETRIAL ORDER, Order Referring Case to Magistrate Judge Robert S. Ballou. Signed by Judge Jackson L. Kiser on 8/25/15. (ham)

08/30/2015 35 NOTICE of Hearing: **(CR)** Bench Trial set for 12/14/2015 at 09:30 AM in Danville before Judge Jackson L. Kiser. **Counsel must contact the Clerk's Office no later than five (5) business days before the scheduled trial date for your technology needs.** (ham)

08/30/2015 36 NOTICE of Requested Hearing by Attorney for Melanie D. Davenport, Michael Dowd, Maurice Jones, Bradley C. Lambert, Terry McAuliffe, David K. Paylor, James P. Skorupa, Conrad Spangler, Molly J. Ward,

		Robert J. Weld, Justin Williams re 32 MOTION TO DISMISS FOR FAILURE TO STATE A CLAIM MOTION to Dismiss for Lack of Jurisdiction Motion to Dismiss hearing date November 6, 2015, at 10:00 a.m., at U.S. District Court, Danville, before Judge Kiser. Confirmation notice to be sent by the Clerk's Office. (Pitchford, Jonathan)
08/30/2015	37	NOTICE of Hearing on Motion 32 MOTION TO DISMISS FOR FAILURE TO STATE A CLAIM MOTION to Dismiss for Lack of Jurisdiction: **(CR)** Motion Hearing set for 11/6/2015 at 10:00 AM in Danville before Judge Jackson L. Kiser. (ham)
09/04/2015	38	NOTICE of Appearance by William Choice Cleveland, IV on behalf of Roanoke River Basin Association, Dan River Basin Association (Cleveland, William)
09/04/2015	39	NOTICE of Appearance by Caleb Adam Jaffee on behalf of Dan River Basin Association, Roanoke River Basin Association (Jaffee, Caleb)
09/04/2015	40	First MOTION to Intervene by Dan River Basin Association, Roanoke River Basin Association. (Jaffee, Caleb)
09/04/2015	41	Brief / Memorandum in Support re 40 First MOTION to Intervene . filed by Dan River Basin Association, Roanoke

River Basin Association. (Jaffee, Caleb)

09/04/2015 42 **MOTION TO DISMISS FOR FAILURE TO STATE A CLAIM** by Dan River Basin Association, Roanoke River Basin Association. (Jaffee, Caleb)

09/04/2015 43 Brief / Memorandum in Support re 42 **MOTION TO DISMISS FOR FAILURE TO STATE A CLAIM** . filed by Dan River Basin Association, Roanoke River Basin Association. (Attachments: # 1 Exhibit Danville Register & Bee, March 28, 2011)(Jaffee, Caleb)

09/04/2015 44 Negative Corporate Disclosure Statement by Roanoke River Basin Association (Jaffee, Caleb)

09/04/2015 45 Negative Corporate Disclosure Statement by Dan River Basin Association (Jaffee, Caleb)

09/11/2015 46 Cross MOTION for Summary Judgment by Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc.. (Attachments: # 1 Text of Proposed Order)(Cooper, Charles)

09/11/2015 47 Brief / Memorandum in Support re 46 Cross MOTION for Summary Judgment, 32 MOTION TO DISMISS FOR FAILURE TO STATE A CLAIM MOTION to Dismiss for Lack of Jurisdiction *(Response in Opposition)*.

		filed by Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc.. (Attachments: # 1 Appendix)(Cooper, Charles)
09/11/2015	48	Declaration re 46 Cross MOTION for Summary Judgment by Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc. (Attachments: # 1 Exhibit 1 & 2, # 2 Exhibit 3 (Part 1 of 6), # 3 Exhibit 3 (Part 2 of 6), # 4 Exhibit 3 (Part 3 of 6), # 5 Exhibit 3 (Part 4 of 6), # 6 Exhibit 3 (Part 5 of 6), # 7 Exhibit 3 (Part 6 of 6), # 8 Exhibit 4 & 5, # 9 Exhibit 6, # 10 Exhibit 7 (Part 1 of 3), # 11 Exhibit 7 (Part 2 of 3), # 12 Exhibit 7 (Part 3 of 3), # 13 Exhibit 8 – 14, # 14 Exhibit 15 (Part 1 of 3), # 15 Exhibit 15 (Part 2 of 3), # 16 Exhibit 15 (Part 3 of 3), # 17 Exhibit 16, # 18 Exhibit 17, # 19 Exhibit 18 – 21, # 20 Exhibit 22 – 27, # 21 Exhibit 28 – 33, # 22 Exhibit 34 – 41, # 23 Exhibit 42 – 48, # 24 Exhibit 49 – 54, # 25 Exhibit 55 – 60, # 26 Exhibit 61 – 67, # 27 Exhibit 68 – 75, # 28 Exhibit 76 – 82, # 29 Exhibit 83 – 89, # 30 Exhibit 90 – 94)(Cooper, Charles)
09/15/2015	49	NOTICE of Requested Hearing by Attorney for Dan River Basin Association, Roanoke River Basin Association re 40 First MOTION to

Intervene Oral Argument on Motion to Intervene hearing date 10/09/2015, at 10:00am, at U.S. District Court, Danville, before Judge Kiser. Confirmation notice to be sent by the Clerk's Office. (Cleveland, William)

09/15/2015 50 NOTICE of Requested Hearing by Attorney for Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc. re 46 Cross MOTION for Summary Judgment Requested hearing date Friday, November 6, 2015, at 10:00 a.m., at U.S. District Court, Danville Courthouse, 700 Main Street, Danville, Virginia 24541, before Judge Kiser. Confirmation notice to be sent by the Clerk's Office. (Cooper, Charles)

09/17/2015 51 NOTICE of Hearing on Motion 40 First MOTION to Intervene: **(CR)** Motion Hearing set for 10/9/2015 at 10:00 AM in Danville before Judge Jackson L. Kiser. (ham)

09/17/2015 52 NOTICE of Hearing on Motion 46 Cross MOTION for Summary Judgment: **(CR)** Motion Hearing set for 11/6/2015 at 10:00 AM in Danville before Judge Jackson L. Kiser. (ham)

09/17/2015 53 NOTICE of Requested Hearing by Attorney for Dan River Basin Association, Roanoke River Basin Association re 42 MOTION TO

DISMISS FOR FAILURE TO STATE A CLAIM Motion to Dismiss hearing date November 6, 2015, at 10am, at U.S. District Court, Danville, before Judge Kiser. Confirmation notice to be sent by the Clerk's Office. (Cleveland, William)

09/17/2015 54 NOTICE of Hearing on Motion 42 MOTION TO DISMISS FOR FAILURE TO STATE A CLAIM: (CR) Motion Hearing set for 11/6/2015 at 10:00 AM in Danville before Judge Jackson L. Kiser. (ham)

09/18/2015 55 RESPONSE to Motion re 40 First MOTION to Intervene . filed by Melanie D. Davenport, Michael Dowd, Maurice Jones, Bradley C. Lambert, Terry McAuliffe, David K. Paylor, James P. Skorupa, Conrad Spangler, Molly J. Ward, Robert J. Weld, Justin Williams. (Pitchford, Jonathan)

09/18/2015 56 REPLY to Response to Motion re 32 MOTION TO DISMISS FOR FAILURE TO STATE A CLAIM, MOTION to Dismiss for Lack of Jurisdiction and RESPONSE in Opposition re 46 Cross MOTION for Summary Judgment filed by Melanie D. Davenport, Michael Dowd, Maurice Jones, Bradley C. Lambert, Terry McAuliffe, David K. Paylor, James P. Skorupa, Conrad Spangler, Molly J. Ward, Robert J. Weld, Justin Williams. (Pitchford, Jonathan) Modified on

9/18/2015 – corrected docket text (ham).

09/21/2015 57 RESPONSE in Opposition re 40 First MOTION to Intervene . filed by Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc.. (Cooper, Charles)

09/28/2015 58 REPLY to Response to Motion re 46 Cross MOTION for Summary Judgment . filed by Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc.. (Cooper, Charles)

10/01/2015 59 REPLY to Response to Motion re 40 First MOTION to Intervene . filed by Dan River Basin Association, Roanoke River Basin Association. (Jaffee, Caleb)

10/09/2015 60 Minute Entry for proceedings held before Judge Jackson L. Kiser: Motion Hearing held on 10/9/2015 re: 40 Motion for Leave to Intervene Pursuant to Fed. R. Civ. P. 24 on Behalf of the Roanoke River Basin Association and the Dan River Basin Association. Order forthcoming. (Court Reporter: Judy Webb) (mlh)

10/09/2015 61 TRANSCRIPT REQUEST (14 calendar days Service) by Melanie D. Davenport, Michael Dowd, Maurice Jones, Bradley C. Lambert, Terry McAuliffe, David K. Paylor, James P.

Skorupa, Conrad Spangler, Molly J. Ward, Robert J. Weld, Justin Williams for Hearing on Motion to Intervene held on **10/09/2015** before Judge Kiser, Judy Webb, OCR. *Transcript Due Deadline will be set when Financial Arrangements are made.* (Pitchford, Jonathan) (Main Document 61 replaced on 10/9/2015 to attach pfd formatted request) (rkm). Modified on 10/9/2015 to include name of Court Reporter (rkm).

10/09/2015 62 **Financial arrangements made** (14 calendar days Service) re 61 Transcript Request,, **Transcript due by 10/23/2015.** (jw) (Entered: 10/13/2015)

10/19/2015 63 TRANSCRIPT of Proceedings: Motion Hearing held on **10/9/15** before Judge Jackson L. Kiser. Court Reporter/Transcriber Judy K. Webb, Telephone number 540–857–5100 X 5333/judyw@vawd.uscourts.gov. **NOTICE RE REDACTION OF TRANSCRIPTS:The parties have seven (7) calendar days to file with the Court a Notice of Intent to Request Redaction of this transcript. If no such Notice is filed, the transcript will be made remotely electronically available to the public without redaction after 90 calendar days. The policy is located on our website at**

www.vawd.uscourts.gov Transcript may be viewed at the court public terminal or purchased through the Court Reporter/Transcriber before the deadline for Release of Transcript Restriction. After that date it may be obtained through PACER. Redaction Request due 11/12/2015. Redacted Transcript Deadline set for 11/23/2015. Release of Transcript Restriction set for 1/22/2016. (jw)

10/19/2015 64 MEMORANDUM OPINION. Signed by Judge Jackson L. Kiser on 10/19/2015. (mlh)

10/19/2015 65 ORDER denying 40 Motion for Leave to Intervene Pursuant to Fed. R. Civ. P. 24 on Behalf of the Roanoke River Basin Association and the Dan River Basin Association; granting Movants leave to file amicus curiae briefs in further proceedings. Signed by Judge Jackson L. Kiser on 10/19/2015. (mlh)

10/19/2015 66 TRANSCRIPT REQUEST – COPY (Expedited–7 calendar days Service) by Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc. for Hearing on Motion to Intervene held on **10/9/2015** reported by Court Reporter Judy K. Webb before Judge Jackson L. Kiser. *Transcript Due Deadline will be set when Financial Arrangements are*

made. (Weitzner, Michael) Modified on 10/21/2015 as a copy request, original previously requested by another party at DE#61 (bkd).

10/20/2015 67 ORDER denying as moot 42 Motion to Dismiss for Failure to State a Claim. Signed by Judge Jackson L. Kiser on 10/20/15. (ham)

11/02/2015 69 Brief/Memorandum *Amicus Curiae.* filed by Dan River Basin Association, Roanoke River Basin Association. (Attachments: # 1 Exhibit Coles Op–Ed, # 2 Exhibit NAS Report chapters 7 and 8, # 3 Exhibit Coles London transcript, # 4 Exhibit Coles New York transcript)(Jaffee, Caleb)

11/03/2015 Notice of Correction: Changed viewing restriction of Document 68 Brief/Memorandum due to attorney attaching incorrect/deficient pdf (s/ signature was omitted; attorney preferred to refile pleading with s/ signature even though not required to do so); only viewable by court personnel. Document correctly filed at Document 69 Brief/Memorandum. (ham)

11/04/2015 70 MOTION for Leave to File *a Response to the Roanoke River Basin Association and Dan River Basin Association's Amicus Curiae Brief* by Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc.,

Virginia Uranium, Inc.. (Attachments: # 1 Proposed Response to Amicus Brief)(Cooper, Charles)

11/05/2015 71 ORDER granting 70 Motion for Leave to File a Response to Roanoke River Basin Association and Dan River Basin Association's Amicus Curiae Brief. Signed by Judge Jackson L. Kiser on 11/5/15. (ham)

11/05/2015 72 Response to 69 Amicus Curiae Brief filed by Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc. (ham)

11/06/2015 73 Minute Entry for proceedings held before Judge Jackson L. Kiser: Motion Hearing held on 11/6/2015 re: 32 MOTION TO DISMISS FOR FAILURE TO STATE A CLAIM, MOTION to Dismiss for Lack of Jurisdiction filed by Conrad Spangler, David K. Paylor, Justin Williams, Terry McAuliffe, Melanie D. Davenport, Molly J. Ward, James P. Skorupa, Bradley C. Lambert, Robert J. Weld, Maurice Jones, Michael Dowd; 46 Cross MOTION for Summary Judgment filed by Virginia Energy Resources, Inc., Virginia Uranium, Inc., Coles Hill, LLC, Bowen Minerals, LLC. Order forthcoming. (Court Reporter: Janelle Mundy (sworn)) (mlh)

11/09/2015 74 TRANSCRIPT REQUEST (Ordinary–30 calendar days Service) by Melanie D. Davenport, Michael Dowd, Maurice Jones, Bradley C. Lambert, Terry McAuliffe, David K. Paylor, James P. Skorupa, Conrad Spangler, Molly J. Ward, Robert J. Weld, Justin Williams for Hearing on Motion to Dismiss held on **November 6, 2015** before Judge Kiser. *Transcript Due Deadline will be set when Financial Arrangements are made.* (Pitchford, Jonathan)

11/10/2015 75 TRANSCRIPT REQUEST – (COPY) by Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc., Virginia Uranium, Inc. for Hearing on Motion to Dismiss and Cross–Motion for Summary Judgment held on **11/6/2015** reported by Court Reporter Janelle Mundy before Judge Jackson L. Kiser. *Transcript Due Deadline will be set when Financial Arrangements are made.* (Cooper, Charles) Corrected request to reflect copy instead of original. Modified on 11/12/2015 (bkd).

12/01/2015 77 TRANSCRIPT of Proceedings: Motion for Summary Judgment held on **November 6, 2015** before Judge Jackson L. Kiser. Court Reporter/Transcriber Janelle Mundy, Contract court reporter, Telephone number 540/342–2547. **NOTICE RE REDACTION OF TRANSCRIPTS:**The parties

have seven (7) calendar days to file with the Court a Notice of Intent to Request Redaction of this transcript. If no such Notice is filed, the transcript will be made remotely electronically available to the public without redaction after 90 calendar days. The policy is located on our website at www.vawd.uscourts.gov Transcript may be viewed at the court public terminal or purchased through the Court Reporter/Transcriber before the deadline for Release of Transcript Restriction. After that date it may be obtained through PACER. Redaction Request due 12/28/2015. Redacted Transcript Deadline set for 1/7/2016. Release of Transcript Restriction set for 3/3/2016. (bkd)

12/02/2015 78 MEMORANDUM OPINION. Signed by Judge Jackson L. Kiser on 12/2/2015. (mlh)

12/02/2015 79 ORDER granting 32 Motion to Dismiss for Failure to State a Claim; granting 32 Motion to Dismiss for Lack of Jurisdiction; denying 46 Cross Motion for Summary Judgment. Clerk is directed to strike this case from the active docket of this Court. Signed by Judge Jackson L. Kiser on 12/2/2015. (mlh)

12/31/2015	80	NOTICE OF APPEAL as to 78 Memorandum Opinion, 79 Order on Motion to Dismiss for Failure to State a Claim, Order on Motion to Dismiss/Lack of Jurisdiction, Order on Motion for Summary Judgment by Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc. & Virginia Uranium, Inc. (Attachment: # 1 Exhibit A – Order of Final Judgment)(Cooper, Charles) Modified on 1/4/2016 – removed filing fee text due to being paid separately (ham).
12/31/2015	81	USCA Appeal Fees received: $505.00; receipt number 7–47678 re 80 Notice of Appeal filed by Virginia Energy Resources, Inc., Virginia Uranium, Inc., Coles Hill, LLC & Bowen Minerals, LLC. (ham) (Entered: 01/04/2016)
01/04/2016	82	Transmittal of Notice of Appeal to 4CCA re 80 Notice of Appeal. NOTE: The Docketing Statement and Transcript Order Form are available on the 4th Circuit Court of Appeals website at www.ca4.uscourts.gov. If CJA24 form(s) are applicable, you must submit a separate Auth–24 for each court reporter from whom you wish to order a transcript through the District Court's eVoucher system. (ham)

01/04/2016	83	Order Directing Appellant to Post Cost Bond, with proper surety, in penal amount of $500.00 within ten days. Signed by Judge Jackson L. Kiser on 1/4/16. (ham)
01/05/2016	84	NOTICE of Docketing Record on Appeal from USCA re 80 Notice of Appeal filed by Virginia Energy Resources, Inc., Virginia Uranium, Inc., Coles Hill, LLC & Bowen Minerals, LLC. USCA Case Number 16–1005; Case Manager M. Radday. (ham)
01/05/2016	85	USCA APPEAL COSTS BOND received in the amount of $500.00; receipt number 4–1842 re 80 Notice of Appeal. (Attachment: # 1 Receipt 4–1842)(ham)
02/17/2017	86	USCA Memorandum Opinion from 4th Circuit re 80 Notice of Appeal; affirming; decided on 2/17/17. (ham)
02/17/2017	87	USCA JUDGMENT as to 80 Notice of Appeal filed by Virginia Energy Resources, Inc., Virginia Uranium, Inc., Coles Hill, LLC, Bowen Minerals, LLC. (ham)
03/13/2017	88	MANDATE of USCA as to 80 Notice of Appeal filed by Virginia Energy Resources, Inc., Virginia Uranium, Inc., Coles Hill, LLC, Bowen Minerals, LLC. (ham)

03/14/2017	89	Order for Release of Appeal Bond to Plaintiffs/Appellants. Signed by Judge Jackson L. Kiser on 3/14/17. (ham)
03/15/2017	90	Disbursement made to counsel per order 89 as to Virginia Uranium, Inc. (erf) (Entered: 03/20/2017)
04/26/2017	91	USCA Notice of Supreme Court Remark: Petition for Writ of Certiorari filed. (ham)
05/22/2018	92	USCA Notice of Supreme Court Remark: Petition for Writ of Certiorari granted. (mlh)

General Docket
United States Court of Appeals
for the Fourth Circuit

Court of Appeals Docket #: 16-1005
Virginia Uranium, Inc. v. John Warren

01/05/2016	1	Case docketed. Originating case number: 4:15-cv-00031-JLK-RSB. Case manager: MRadday. [16-1005] MR [Entered: 01/05/2016 08:43 AM]
01/05/2016	2	DOCKETING NOTICE issued Re: [1] case docketed Initial forms due within 14 days. Originating case number: 4:15-cv-00031-JLK-RSB. Mailed to: attorneys Kirk and Weitzner. [16-1005] MR [Entered: 01/05/2016 09:34 AM]
01/05/2016	3	BRIEFING ORDER filed. Mailed to: attorneys Kirk and Weitzner. Opening Brief and Appendix due 02/16/2016. Response Brief due 03/18/2016 [16-1005] MR [Entered: 01/05/2016 09:36 AM]
01/05/2016	4	APPEARANCE OF COUNSEL (Local Rule 46(c)) by J. Duncan Pitchford for Melanie D. Davenport, Michael Dowd, Maurice Jones, Bradley C. Lambert, Terry McAuliffe, David K. Paylor, James P. Skorupa, Conrad Spangler, Molly J. Ward, Robert J. Weld and Justin Williams.[999729938] [16-1005] Jonathan Pitchford [Entered: 01/05/2016 11:05 AM]

01/05/2016	5	APPEARANCE OF COUNSEL (Local Rule 46(c)) by Rhodes B. Ritenour for Melanie D. Davenport, Michael Dowd, Maurice Jones, Bradley C. Lambert, Terry McAuliffe, David K. Paylor, James P. Skorupa, Conrad Spangler, Molly J. Ward, Robert J. Weld and Justin Williams.[999729942] [16-1005] Jonathan Pitchford [Entered: 01/05/2016 11:07 AM]
01/05/2016	6	ORDER filed [999730002] substituting party (FRAP 43) John W. Warren substituted for Conrad Spangler Copies to all parties. Mailed to: attorneys Kirk and Weitzner. [16-1005] MR [Entered: 01/05/2016 11:34 AM]
01/05/2016	7	APPEARANCE OF COUNSEL (Local Rule 46(c)) by Charles J. Cooper for Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc. and Virginia Uranium, Inc..[999730519] [16-1005] Charles Cooper [Entered: 01/05/2016 04:29 PM]
01/05/2016	8	APPEARANCE OF COUNSEL (Local Rule 46(c)) by Michael W. Kirk for Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc. and Virginia Uranium, Inc..[999730523] [16-1005] Michael Kirk [Entered: 01/05/2016 04:32 PM]

01/05/2016	9	APPEARANCE OF COUNSEL (Local Rule 46(c)) by John D. Ohlendorf for Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc. and Virginia Uranium, Inc..[999730526] [16-1005] John Ohlendorf [Entered: 01/05/2016 04:34 PM]
01/05/2016	10	DISCLOSURE OF CORPORATE AFFILIATIONS (Local Rule 26.1) by Appellant Virginia Uranium, Inc.. Was any question on Disclosure Form answered yes? Yes [999730532] [16-1005] Charles Cooper [Entered: 01/05/2016 04:41 PM]
01/05/2016	11	DISCLOSURE OF CORPORATE AFFILIATIONS (Local Rule 26.1) by Appellant Coles Hill, LLC. Was any question on Disclosure Form answered yes? No [999730533] [16-1005] Charles Cooper [Entered: 01/05/2016 04:42 PM]
01/05/2016	12	DISCLOSURE OF CORPORATE AFFILIATIONS (Local Rule 26.1) by Appellant Bowen Minerals, LLC. Was any question on Disclosure Form answered yes? No [999730536] [16-1005] Charles Cooper [Entered: 01/05/2016 04:43 PM]
01/05/2016	13	DISCLOSURE OF CORPORATE AFFILIATIONS (Local Rule 26.1) by Appellant Virginia Energy Resources, Inc.. Was any question on Disclosure

Form answered yes? Yes [999730538] [16-1005] Charles Cooper [Entered: 01/05/2016 04:44 PM]

01/05/2016 14 DOCKETING STATEMENT by Appellants Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc. and Virginia Uranium, Inc.. [16-1005] Charles Cooper [Entered: 01/05/2016 05:02 PM]

01/05/2016 15 MOTION by Appellants Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc. and Virginia Uranium, Inc. to extend filing time for opening brief and appendix until March 17, 2016. Date and method of service: 01/05/2016 ecf. [999730565] [16-1005] Charles Cooper [Entered: 01/05/2016 06:04 PM]

01/06/2016 16 NOTICE ISSUED re: case caption modified.. [16-1005] MR [Entered: 01/06/2016 09:04 AM]

01/06/2016 17 ORDER filed [999730747] granting Motion to extend filing time [15]. Opening brief and appendix due 03/17/2016. Response brief due 04/18/2016. Copies to all parties.. [16-1005] MR [Entered: 01/06/2016 09:11 AM]

01/07/2016 18 APPEARANCE OF COUNSEL (Local Rule 46(c)) by Stuart A. Raphael for Bradley C. Lambert, James P.

Skorupa and John Warren.[999731911] [16-1005] Stuart Raphael [Entered: 01/07/2016 01:31 PM]

03/17/2016 19 BRIEF by Appellants Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc. and Virginia Uranium, Inc. in electronic and paper format. Type of Brief: OPENING. Method of Filing Paper Copies: mail. Date Paper Copies Mailed, Dispatched, or Delivered to Court: 03/17/2016. [999777153] [16-1005] Charles Cooper [Entered: 03/17/2016 05:37 PM]

03/17/2016 20 FULL ELECTRONIC APPENDIX and full paper appendix by Appellants Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc. and Virginia Uranium, Inc.. Method of Filing Paper Copies: mail. Date paper copies mailed dispatched or delivered to court: 03/17/2016. [999777155] [16-1005] Charles Cooper [Entered: 03/17/2016 05:44 PM]

03/17/2016 21 OPENING BRIEF (PAPER) file-stamped, on behalf of Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc. and Virginia Uranium, Inc.. Number of pages: [88]. Sufficient: YES. Number of Copies: [1]. Entered on Docket Date: 03/18/2016. Received by clerk

date: 03/18/2016. [999777597] [16-1005] MR [Entered: 03/18/2016 12:25 PM]

03/17/2016 22 APPENDIX (PAPER) file-stamped, on behalf of Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc. and Virginia Uranium, Inc.. Total number of volumes (including any sealed): 3. Total number of pages in all volumes: 941. Total number of sealed volumes: 0. Sufficient? Yes. CD/DVD/Other exhibit? No. Number of Copies: 1. Entered on Docket Date: 03/18/2016. Received by clerk date: 03/18/2016. [999777601] [16-1005] MR [Entered: 03/18/2016 12:29 PM]

04/11/2016 23 APPEARANCE OF COUNSEL (Local Rule 46(c)) by Peter C. Meier for Nuclear Energy Institut [999792753] [16-1005] Peter Meier [Entered: 04/11/2016 02:26 PM]

04/11/2016 24 DISCLOSURE OF CORPORATE AFFILIATIONS (Local Rule 26.1) by Potential Amicus Curiae Nuclear Energy Institute. Was any question on Disclosure Form answered yes? No [999792760] [16-1005] Peter Meier [Entered: 04/11/2016 02:28 PM]

04/11/2016 25 MOTION by Potential Amicus Curiae Nuclear Energy Institute to file amicus curiae brief (FRAP 29(e)) with consent of all parties on appeal outside time allowed by FRAP 29(e)..

Date and method of service: 04/11/2016 ecf. [999792784] [16-1005] Peter Meier [Entered: 04/11/2016 02:35 PM]

04/11/2016 26 AMICUS CURIAE/INTERVENOR BRIEF by Potential Amicus Curiae Nuclear Energy Institute in electronic and paper format. Type of Brief: Amicus Curiae. Method of Filing Paper Copies: hand delivery. Date Paper Copies Mailed, Dispatched, or Delivered to Court: 04/11/2016. [999792794] [16-1005] Peter Meier [Entered: 04/11/2016 02:41 PM]

04/11/2016 28 AMICUS CURIAE BRIEF (PAPER) file-stamped, on behalf of Nuclear Energy Institute. Number of pages: [32]. Number of Copies: [1]. Entered on Docket Date: 04/12/2016. Received by clerk date: 04/11/2016. [999793625] [16-1005] MR [Entered: 04/12/2016 12:32 PM]

04/12/2016 27 ORDER filed [999793601] granting Motion to file amicus curiae brief [25]. Disclosure Statement filed (if corporate amicus)? Y. Appearance Form filed? Y. Copies to all parties.. [16-1005] MR [Entered: 04/12/2016 12:21 PM]

04/18/2016 29 BRIEF by Appellees Bradley C. Lambert, James P. Skorupa and John Warren in electronic and paper

format. Type of Brief: RESPONSE. Method of Filing Paper Copies: hand delivery. Date Paper Copies Mailed, Dispatched, or Delivered to Court: 04/18/2016. [999797224] [16-1005] Stuart Raphael [Entered: 04/18/2016 01:47 PM]

04/18/2016 30 RESPONSE BRIEF (PAPER) file-stamped, on behalf of Bradley C. Lambert, James P. Skorupa and John Warren. Number of pages: [83]. Sufficient: YES. Number of Copies: [4]. Entered on Docket Date: 04/19/2016. Received by clerk date: 04/18/2016. [999797859] [16-1005] MR [Entered: 04/19/2016 09:15 AM]

04/25/2016 31 MOTION by Dan River Basin Association and Roanoke River Basin Association as Amici Curiae in Support of Defendants-Appellees to file amicus curiae brief (FRAP 29(e)) with consent of all parties on appeal within time allowed by FRAP 29(e).. Date and method of service: 04/25/2016 ecf. [999803951] [16-1005] William Cleveland [Entered: 04/25/2016 04:53 PM]

04/25/2016 32 AMICUS CURIAE/INTERVENOR BRIEF by Dan River Basin Association and Roanoke River Basin Association as Amici Curiae in Support of Defendants-Appellees in electronic and paper format. Type of Brief: Amicus Curiae. Method of

Filing Paper Copies: mail. Date Paper Copies Mailed, Dispatched, or Delivered to Court: 04/26/2016. [999803968] [16-1005] William Cleveland [Entered: 04/25/2016 05:01 PM]

04/25/2016 36 DISCLOSURE OF CORPORATE AFFILIATIONS (Local Rule 26.1) by Amicus Supporting Appellee Dan River Basin Association. Was any question on Disclosure Form answered yes? No [999812628] [16-1005] MR [Entered: 05/04/2016 11:33 AM]

04/25/2016 37 DISCLOSURE OF CORPORATE AFFILIATIONS (Local Rule 26.1) by Amicus Supporting Appellee Roanoke River Basin Association. Was any question on Disclosure Form answered yes? No [999812632] [16-1005] MR [Entered: 05/04/2016 11:34 AM]

04/25/2016 38 AMICUS CURIAE BRIEF (PAPER) file-stamped, on behalf of Dan River Basin Association and Roanoke River Basin Association. Number of pages: [44]. Number of Copies: [1]. Entered on Docket Date: 05/04/2016. Received by clerk date: 04/29/2016. [999812636] [16-1005] MR [Entered: 05/04/2016 11:36 AM]

04/27/2016 34 ORDER filed [999805525] granting motion to file amicus curiae brief [31].

Disclosure Statement filed (if corporate amicus)? N/A. Appearance Form filed? Y. Copies to all parties.. [16-1005] MR [Entered: 04/27/2016 08:07 AM]

05/02/2016 35 BRIEF by Appellants Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc. and Virginia Uranium, Inc. in electronic and paper format. Type of Brief: REPLY. Method of Filing Paper Copies: mail. Date Paper Copies Mailed, Dispatched, or Delivered to Court: 05/02/2016. [999810190] [16-1005] Charles Cooper [Entered: 05/02/2016 03:06 PM]

05/02/2016 39 REPLY BRIEF (PAPER) file-stamped, on behalf of Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc. and Virginia Uranium, Inc.. Number of pages: [32]. Sufficient: YES. Number of Copies: [1]. Entered on Docket Date: 05/05/2016. Received by clerk date: 05/05/2016. [999813920] [16-1005] MR [Entered: 05/05/2016 12:56 PM]

07/15/2016 40 CASE TENTATIVELY CALENDARED for oral argument during the 10/25/16 - 10/28/16 argument session. Notify Clerk's Office of any scheduling conflict by: 07/25/2016 [16-1005] JLC [Entered: 07/15/2016 03:41 PM]

07/18/2016 41 Letter re: [40] case tentatively calendared by Appellees Bradley C. Lambert, James P. Skorupa and John Warren. [999890372] [16-1005] Stuart Raphael [Entered: 07/18/2016 01:18 PM]

07/19/2016 42 Additional copies of OPENING BRIEF, JOINT APPENDIX (vols. 1-3), and REPLY BRIEF received from Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc. and Virginia Uranium, Inc.. [16-1005] AC [Entered: 07/21/2016 08:50 AM]

08/04/2016 43 COPY FOLLOW-UP NOTICE issued to Nuclear Energy Institute and Dan River Basin Association and Roanoke River Basin Association requesting additional copies of Amicus briefs. Additional copies due 08/09/2016 [16-1005] AD [Entered: 08/04/2016 03:00 PM]

08/08/2016 44 Additional copies of AMICUS BRIEF received from Nuclear Energy Institute. [16-1005] AD [Entered: 08/08/2016 09:41 AM]

08/08/2016 45 Additional copies of AMICUS BRIEF received from Dan River Basin Association and Roanoke River Basin Association. [16-1005] AD [Entered: 08/08/2016 04:12 PM]

08/11/2016 46 CASE CALENDARED for oral argument. Date: 10/28/2016. Registration Time: 7:45 - 8:00. Daily

		Arguments Begin: 8:30. Oral argument acknowledgment form due within 5 days. [16-1005] JLC [Entered: 08/11/2016 04:13 PM]
08/12/2016	47	ORAL ARGUMENT ACKNOWLEDGMENT by Appellants Bowen Minerals, LLC, Coles Hill, LLC, Virginia Energy Resources, Inc. and Virginia Uranium, Inc.. Counsel arguing: Charles J. Cooper Opening argument time: 13 minutes Rebuttal argument time: 7 minutes [999909308] [16-1005] Charles Cooper [Entered: 08/12/2016 10:37 AM]
08/15/2016	48	ORAL ARGUMENT ACKNOWLEDGMENT by Appellees Bradley C. Lambert, James P. Skorupa and John Warren. Counsel arguing: Stuart A. Raphael Opening argument time: 20 [999910256] [16-1005] Stuart Raphael [Entered: 08/15/2016 01:28 PM]
10/28/2016	49	ORAL ARGUMENT heard before the Honorable William B. Traxler, Jr., Albert Diaz and Pamela A. Harris. Attorneys arguing case: Mr. Charles J. Cooper for Appellants Virginia Uranium, Inc., Coles Hill, LLC, Bowen Minerals, LLC and Virginia Energy Resources, Inc. and Stuart Alan Raphael for Appellees Bradley C. Lambert, James P. Skorupa and John Warren. Courtroom Deputy:

Jocelyn Mitchell Manion. [999957350] [16-1005] JM [Entered: 10/28/2016 12:33 PM]

01/30/2017 50 Letter re: Rhodes Ritenour no longer employed by AG's office and no longer participating on appeal by Appellee Vicki Montgomery in 16-1916, Appellees Bradley C. Lambert and James P. Skorupa in 16-1005, Appellee Denise Lawhorn in 16-1936. [1000012647] [16-1916, 16-1005, 16-1936] AW [Entered: 01/30/2017 10:18 AM]

02/17/2017 51 PUBLISHED AUTHORED OPINION filed. Originating case number: 4:15-cv-00031-JLK-RSB. [1000025607]. [16-1005] MR [Entered: 02/17/2017 08:50 AM]

02/17/2017 52 JUDGMENT ORDER filed. Disposition method: 16-1005 opn.p.arg. Decision: Affirmed. Originating case number: 4:15-cv-00031-JLK-RSB. Entered on Docket Date: 02/17/2017. [1000025610] Copies to all parties and the district court/agency.. [16-1005] MR [Entered: 02/17/2017 08:53 AM]

02/17/2017 53 OPINION ATTACHMENTS (2). [16-1005] ZS [Entered: 02/22/2017 03:23 PM]

03/13/2017 54 Mandate issued. Referencing: [52] Judgment Order, [51] Published Authored Opinion. Originating case

number: 4:15-cv-00031-JLK-RSB.. [16-1005] MR [Entered: 03/13/2017 07:49 AM]

04/26/2017 55 SUPREME COURT REMARK– petition for writ of certiorari filed. 04/21/2017. 16-1275. [16-1005] SJC [Entered: 04/26/2017 02:45 PM]

05/22/2018 56 SUPREME COURT REMARK– petition for writ of certiorari granted. 05/21/2018 [16-1005] SJC [Entered: 05/22/2018 07:58 AM]

PilotOnline.com

Cuccinelli, McAuliffe weigh in on uranium mining

By Steve Szkotak
The Associated Press
© March 19, 2013

RICHMOND

If Gov. Bob McDonnell decides against reviving the issue of uranium mining this year, the two men who are likely to succeed him are willing to keep the issue alive in 2014.

Republican Attorney General Ken Cuccinelli and Democrat Terry McAuliffe conditionally said they would be open to consider uranium mining, in response to an Associated Press request for their positions on the fiercely debated subject. Each identified key factors in their ultimate decision, such as its economic impact and whether mining can be done safely.

Cuccinelli goes further than his presumptive Democratic opponent in November, stating that some of those questions could be answered if state regulations governing mining were in place before the General Assembly takes up the issue anew, as proponents have suggested.

"This would clarify what would be involved and would eliminate any uncertainty prior to the General Assembly's decision," Cuccinelli's office said in a statement.

Despite a big build up to the 2013 session of the General Assembly, proposals to end a 1983 prohibition on

uranium mining failed to even achieve a committee vote amid almost certain defeat. Mining supporters then suggested that McDonnell direct the appropriate agencies to draw up regulations to better inform legislators when they take up the issue again, which is expected.

McDonnell has said he is giving the suggestion any thought while he continues to review legislation passed by the General Assembly and until after an April veto session. He has also raised the possibility he might not take a public position on uranium mining.

The issue is being pushed by Virginia Uranium Inc., which wants to mine a 119-million-pound deposit of the radioactive ore in Pittsylvania County. Is the largest known uranium deposit in the United States.

Before it can mine, however, a decades-old ban must be lifted by the General Assembly. Virginia Uranium has made it clear it will not walk away from a deposit it values at $7 billion.

McAuliffe and Cuccinelli offered succinct responses to the question of uranium mining, with the attorney general offering a slightly more expansive answer.

"Mr. Cuccinelli feels the factors that should be weighed . . . include the safety of miners and the surrounding community, jobs created, tax revenues generated, the environmental impact, the cultural impact on the region, and energy independence for Virginia and America," wrote Caroline Gibson, a spokeswoman for his office.

She said Cuccinelli "believes that it would be appropriate" to have regulations in place before the General Assembly considers ending the ban.

McAuliffe's campaign issued his response:

"Any economic proposal in these tough times merits a hard look. However, I would need to be certain that mining uranium can be done safely and cleaned up completely before a moratorium is lifted."

McAuliffe added today, "So far I have not seen that."

McAuliffe is a businessman and former chairman of the National Democratic Committee.

Opponents and supporters of mining would argue those questions both men cite have already been answered. Uranium mining has been studied extensively over the past few years, from an environmental and economic perspective. A study by the National Academy of Sciences, completed in late 2011, is the most widely accepted.

The mostly [sic] commonly cited portion of the report states Virginia would have to overcome "steep hurdles" before allowing mining and milling of the ore to ensure the safety of workers, the public and the environment. Mining supporters cite a section of the report that states "internationally accepted best practices" governing mining could be a starting point for Virginia.

Full-fledged uranium mining has never occurred on the East Coast. Critics say the state's climate is too wet

and prone to tropical storms to allow uranium mining and milling, or the separation of ore from rock.

Virginia Uranium says mining and milling can be done safely and create jobs in the economically depressed Southside region of the state.

Lt. Gov. Bill Bolling was expected to offer anti-mining voters an option in November after he declared his opposition to uranium mining, but has since abandoned a GOP or independent bid for governor.

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF VIRGINIA
Danville Division

VIRGINIA URANIUM, INC., *et al.*,

Plaintiffs,

v. CIVIL ACTION NO.

TERRY McAULIFFE, *et al.*, 4:15CV-31-JLK

Defendants.

MEMORANDUM IN SUPPORT OF MOTION TO DISMISS

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Attorney General

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* * *

[14] **II. The Atomic Energy Act does not prohibit Virginia from considering health and safety concerns in regulating conventional uranium mining.**

In light of the foregoing, it cannot be questioned that Virginia plainly enjoys the authority to regulate conventional uranium mining on private property. And, as noted previously, the Plaintiffs do not appear to seriously contest the issue in their Complaint. *See* Complaint at 13 ¶ 37 (Page ID#13). The Plaintiffs nonetheless maintain that Va. Code § 45.1-283 is preempted by the Atomic Energy Act because Virginia may have considered radiological safety issues in enacting the legislation. The Plaintiffs point to a number of past statements by members of [15] various study commissions as evidence that Virginia rested its decision to both pass the moratorium, and to not subsequently enact a regulatory scheme permitting conventional uranium mining, upon radiological safety concerns. According to the Plaintiffs, this consideration is precluded by the sweep of the AEA.

Assuming for purposes of the current motion the Plaintiffs are correct, and one of the purposes[16] behind

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[16] It bears noting that "inquiry into legislative motive is often an unsatisfactory venture," and this is particularly true for the Virginia General Assembly, as it does not regularly publish committee reports or other similar documentation, in contrast to those available for evaluating the motivation behind federal statutes. *PG&E*, 461 U.S. at 216 (citing *United States v. O'Brien*, 391 U.S. 367, 383 (1968)). Further, it is "particularly pointless" to do so in this case where "it is clear that the States have been allowed to retain authority over" uranium mining. *Id.*

enacting[16] § 45.1-283 was to address potential radiological safety concerns,[17] nothing in the AEA precludes such a consideration. As noted above, nothing in the text of the statute itself, the legislative history behind its enactment, subsequent amendments to the statute or the NRC's interpretation of its power under the Act suggest the AEA reaches conventional uranium mining on private lands. It "would be odd, if not irrational, to conclude" that Congress excluded uranium mining from the ambit of the Act, yet at the same time somehow expressed a "clear and manifest purpose" to limit the issues the Commonwealth may consider in exercising its historic police powers. *English*, 496 U.S. at 86; *PG&E*, 461 U.S. at 206.

This, however, is the conclusion the Plaintiffs claim *PG&E* and its progeny compel. Pointing to language in the decision that the "Federal Government

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[16] Much of what the Plaintiffs discuss in their lengthy narrative occurred after the enactment of the statute. How these post-hoc actions bear upon the decision to enact the statute is difficult to discern.

[17] The attachments to the Plaintiffs' Complaint fail to support their central tenet, which is that the 1982 statute arose out of concerns for radiological safety. Both the 1981 House Joint Resolution (attached as Exhibit 1 to the Complaint) and the provisions of Chapter 269 of the 1982 Acts of Assembly, wherein the General Assembly adopted Va. Code § 45.1-283 (attached as Exhibit 2 to the Complaint), state that the study of uranium mining, and then the enactment of the moratorium, stem from the General Assembly's concerns about potential adverse effects upon the "environment and the health and safety of the public." Va. Code §45.1-272 (1982). At no point does the General Assembly reference radiological safety; rather only the historic, police power concerns of health, safety and general welfare. *See* Section III, *infra*.

has occupied the entire field of nuclear safety concerns," the Plaintiffs contend any decision that rests, in part, upon [16] radiological safety is solely the province of the United States. *PG&E*, 461 U.S. at 212. Nothing in the texts of the decisions compels such a bizarre conclusion.

First, as noted previously, the Supreme Court has three times considered the preemptive effect of the Act, and on all three occasions, even in areas where the NRC robustly exercises its regulatory authority, found state regulation or state law not preempted by the Act. *See PG&E*, 461 U.S. at 222-23 (concluding the AEA did not preempt a California statute prohibiting nuclear plant construction until development of plan for waste disposal); *Silkwood*, 464 U.S. at 256 (finding that the AEA did not preempt state law allowing for the award of punitive damages for safety violations at a nuclear fuel facility); *English*, 492 U.S. at 90 (concluding that the AEA did not prohibit a claim of intentional infliction of emotional distress). The *PG&E* court took pains to note that the Act reserves to the several states – again, even in areas where the NRC has exercised the full scope of its statutory mandate – "their traditional authority" over such issues as "land use." *PG&E*, 461 U.S. at 212. Further, in *English*, the Court pared back some of the broad dicta in *PG&E* by noting "for a state law to fall within the pre-empted zone, it must have some direct and substantial effect on the decisions made by those *who build or operate nuclear facilities* concerning radiological safety levels." *English*, 496 U.S. at 85 (emphasis added).

Indeed, the cases where lower courts have found preclusive effect of the Act have been associated with direct impacts upon those who build or operate nuclear facilities regulated by the NRC. For example, in *Entergy Nuclear Vermont Yankee, LLC v. Shumlin*, 733 F.3d 393 (2nd Cir. 2013), relied upon by the Plaintiffs, the state law in question attempted to impose safety requirements at the Vermont Yankee nuclear power plant. In *United States v. Manning*, 527 F.3d 828 (9th Cir. 2008), the state law involved "cleanup of existing contamination" at the [17] Hanford nuclear reservation. *Id.* at 830. In *Westinghouse*, the court addressed radiological cleanup of a former nuclear fuel facility. *Id.*, 487 F. Supp. 2d at 1078.

In each of these situations, the "matter on which the State assert[ed] the right to act" was clearly "regulated by the [AEA]." *PG&E*, 461 U.S. at 213. This stands in stark contrast to the question of conventional uranium mining, which, as shown, is not in any way regulated by the AEA. Nothing suggests the state may not exercise the full scope of its "historic police powers", including the ability to address radiological safety concerns, in those areas which are not regulated by the AEA. *PG&E*, 461 U.S. at 206.

Further, states have continued to exercise their rights to regulate conventional uranium mining. For example, the Texas Uranium Surface Mining and Reclamation Act, Tex. Nat. Res. Code § 131 *et seq.*, empowers Texas state regulators to require mine operators address any number of health and safety concerns before they receive a permit to conduct conventional

uranium mining activities in Texas. The enabling regulations direct that any mine operations must be conducted "as to prevent unreasonable degradation to land and water resources" and otherwise to "prevent adverse effects to society and the environment." Tit. 16, Part 1, Ch. 11, R. 11.71 Texas Admin. Code. While no state could intrude upon areas regulated by other federal statutes (such as the Clean Air Act), no provision of the AEA suggests that a state could not consider the full scope of potential environmental effects, including radiologic, in otherwise regulating conventional uranium mining.

* * *

APR 28 1980

MEMORANDUM

FOR: Chairman Ahearne

FROM: Howard K. Shapar
Executive Legal Director

THRU: William J. Dircks
(Signed) William J. Dircks
Acting Executive Director
for Operations

SUBJECT: OELD LEGAL OPINION ON TWO QUESTIONS RELATING TO OPERATION OF THE URANIUM MILL TAILINGS RADIATION CONTROL ACT OF 1973

Following your recent meeting with Governor Herschler of Wyoming, (which capped a series of meetings and exchanges of letters with the Governor and other officials of the State), you asked for answers to the following questions:

1. What is the extent, if any, of NRC's legal authority to impose license conditions to protect groundwater from contaminants which result from licensed operations connected with in-situ extraction of source material?

2. Has non-Agreement State authority over the non-radiological hazards of uranium mill tailings been preempted by the Federal Government and, if not, what, if any, authority is shared between the NRC and the non-Agreement States.

The preemption issue, in particular, is extremely complex because of some cumbersome and internally inconsistent statutory language that the Attorney General of Wyoming has correctly likened to a Brobdingnagian Knot." Comprehensive legal analyses of each question are presented in the two attachments to this memorandum. A summary of the conclusions is presented below.

Question 1. We conclude that the NRC has the legal authority to impose groundwater protection conditions upon its in-situ extraction licensees under the licensing and regulatory authority found in the Atomic Energy Act of 1954, as amended by the Uranium Mill Tailings Radiation Control Act of 1978 as amended, (Mill Tailings Act.) This is so even though the definition of uranium mill tailings in our regulations (10 CFR 40.4(a-1)) excludes underground ore bodies depleted by solution extraction. This is because the potential interaction with groundwater is so integrally related to the above-ground processing (which we do license) as to be properly the subject of license conditions, just as, historically, we were able to regulate the generation (but not subsequent use) of tailings from the conventional milling process. This specific authority reinforces the general authority available under the National Environmental Policy Act to impose environmental license conditions.

Question 2. The second question presents extremely difficult questions of the proper construction of the Mill Tailings Act and the so-called remedial amendments to

it. The problem is compounded by the paucity of legislative history.

A conclusion of preemption would mean that the federal government has so completely occupied the field of regulation over the nonradiological hazards of uranium mill tailings that there is no room for any exercise of non-Agreement State authority in this area. Conversely, concurrent jurisdiction would mean that non-Agreement States could exercise authority over the very same subject matter as the NRC – the nonradiological hazards of uranium mill tailings – though such concurrent exercise of authority would have to be consistent with the federal scheme of regulation. We note, however, that even where there is concurrent jurisdiction, the supremacy clause of the Constitution requires that particular state regulation must give way to federal authority in the event of a conflict such that compliance with both federal and state regulatory requirements is impossible.

Though the question is very close, we conclude that the better legal view is that there is insufficient evidence of Congressional intent to completely and exclusively occupy the field to override the strong presumption against implied preemption of historic state policy powers to regulate matters affecting the public health and safety. There is, therefore, in our view, concurrent jurisdiction over the nonradiological hazards of uranium mill tailings. This conclusion is somewhat stronger with respect to the period before November 8, 1981, because section 204(h)(1) of the Mill Tailings Act, added by the remedial amendments, operates (according

to the best interpretation) to expressly preserve previously existing non-Agreement State authority over the non-radiological hazards of uranium mill tailings until that date.

This paper has been coordinated with the Office of the General Counsel.

[Illegible] 4/24/80
Howard K. Shapar
Executive Legal Director

Attachments: As stated

Distribution:

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Commissioner Bradford	EDO R/File	
OPE	OELD	
CCC		

Contacts: W. Parler 492-7527 (Attachment A)
G. Cunningham 492-7203 (Attachment B)

ATTACHMENT A

NRC's AUTHORITY TO IMPOSE CONDITIONS TO PROTECT GROUNDWATER IN ITS LICENSES FOR THE IN SITU EXTRACTION OF SOURCE MATERIAL IN NON-AGREEMENT STATES

This analysis deals with the question of NRC's legal authority to impose license conditions in its licenses for the in situ extraction of source material to protect

groundwater from contaminants which result from the licensed activity in non-Agreement States.

In summary, the NRC has the legal authority to impose such license conditions under its licensing and regulatory authority in the Atomic Energy Act of 1954, as amended by the Uranium Mill Tailings Radiation Control Act of 1978. This specific authority reinforces the general authority available under the National Environmental Policy Act (NEPA) to impose environmental license conditions.[1]

The Factual Background

Uranium oxide (U_3O_4) is processed from uranium ore by a series of physical and chemical actions. The conventional uranium oxide production process is conducted in uranium mills which are generally located near uranium mines, and the mills receive uranium ore either directly from mines or from intermediate ore buying stations. Uranium ore is also processed by an in situ or solution extraction process which combines uranium mining and milling into essentially one operation.[2] This process, also called injection mining or

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[1] It is noted that other agencies may have regulatory authority in this area under other Federal laws, such as the Resource Conservation and Recovery Act of 1976, 42 U.S.C. § 6901 *et seq.*, the Federal Water Pollution Control Act, 33 U.S.C. § 1251 *et seq.* and the Safe Drinking Water Act, 42 U.S.C. § 300 *et seq.*

[2] In 1976, about 2% of the total uranium concentrate produced in the United States resulted from in situ operations. U.S. NUCLEAR REGULATORY COMMISSION, DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT ON URANIUM MILLING, at 8-2 (NUREG-0511, April 1979). There is reason to

borehole leaching, involves (1) the injection of a leach solution (lixiviant) through lined wells into a uranium-bearing ore body to form a chemical compound with the uranium, (2) mobilization of the uranium complex formed, and (3) surface recovery of the solution bearing the uranium complex via production wells. Uranium is then separated from the pregnant leach solution by milling unit operations at the surface.[3]

Unlike conventional milling operations, in situ extraction requires no ore mining, transportation, crushing, or grinding. Moreover, the solution extraction process does not produce conventional mill tailings.[4] It does,

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believe, however, that in situ extraction will become a significant means of uranium extraction in the near future, especially in States like Texas and Wyoming, where small pockets of uranium deposits are particularly susceptible to in situ techniques. *See* U.S. NUCLEAR REGULATORY COMMISSION, TRANSCRIPT OF PUBLIC HEARING THE MATTER OF DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT ON URANIUM MILLING, 46 *et seq*. (Denver, Oct. 1. 1979) (statement of James Montgomery, Colorado Department of Health).

[3] U.S. NUCLEAR REGULATORY COMMISSION, FINAL ENVIRONMENTAL STATEMENT RELATED TO THE OPERATION OF HIGHLAND URANIUM SOLUTION MINING PROJECT, 3-1 (NUREG-0489, Nov. 1978) Friedman, *Environmental Problems Relating to Uranium Mining and Milling*, 11 NAT. RESOURCES LAW. 277 (1978).

[4] Uranium ore usually contains only a very small fraction, often less than 1 percent by weight, of useable uranium oxide. Consequently, the milling process generates large amounts of waste tailings in the form of sand-like material. These "mill tailings" contain traces of the chemicals used to extract uranium from the ore and more importantly, most of the radioactivity naturally associated with the ore due to the presence of radioactive decay products of uranium. See NRC Policy Statement an "Assessment

however, produce solid and liquid wastes that are similar to those of conventional processes and that also require controlled disposal. Disposal of wastes from in situ operations may be accomplished through management like that used for conventional tailings piles or through deep well disposal, also known as reinjection. As a general rule, the most serious environmental impact associated with solution extraction operation is potential contamination of the groundwater by these wastes.[5]

Uranium milling, whether by the conventional or by the in situ process, has always required a license under the Atomic Energy Act. The uranium oxide is source material which the Atomic Energy Act of 1954 requires a license for its possession and use "after removal from its place of deposit in nature."[6]

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of Environmental Impacts of Uranium Mills in Agreement States," 43 F.R. No. 81 April 26, 1978.

[5] U.S. NUCLEAR REGULATORY COMMISSION, FINAL ENVIRONMENTAL STATEMENT RELATED TO THE OPERATION OF HIGHLAND URANIUM SOLUTION MINING PROJECT, 3-1 THROUGH 3-6 (NUREG-0489, Nov. 1978).

[6] "Source Material" is defined in section 11z of the Atomic Energy Act of 1954, 42 U.S.C. § 2014z. Section 62 of that Act, 42 U.S.C. § 2092, generally, requires a license for the transfer, receipt, possession etc. of "any source material after removal from its place of deposit in nature, except that licenses shall not be required for quantities of source material which, in the opinion of the Commission, are unimportant". NRC is authorized to issue licenses to possess and use source material resulting from uranium ore processing by Section 63 of the Atomic Energy Act, 42 U.S.C. § 2093. Regulatory requirements for such source material licenses are stated in 10 CFR Part 40 "Domestic Licensing of

During the two decades of licensing the processing of uranium ore, attention has focused on the control over mill tailings from conventional uranium milling, which, until the Atomic Energy Act was amended on November 8, 1978 by the Uranium Mill Tailings Radiation Control Act (UMTRCA),[7] were not themselves within the definition of source material (or any other material licensable by the Commission) and therefore the mill tailings themselves were beyond the NRC's licensing jurisdiction.[8]

In 1972, however, the AEC published a regulation requiring the preparation of an environmental impact statement, under the authority of the National Environmental Policy Act (NEPA),[9] for each license issued for uranium ore processing. Subsequent to 1972 and until the enactment of the UMTRCA, the NRC licensed and regulated uranium ore processing in

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Source Material." The conventional mining operation itself, however, is under the jurisdiction of other agencies and departments. For example, the Federal Mine Safety and Health Act of 1977 (Public Law 95-164, November 9, 1977) authorizes the Secretary of Labor to establish health and safety standards for mine workers. Also, the Environmental Protection Agency has authority for regulating certain environmental aspects of mining under the Resource Conservation and Recovery Act of 1976.

[7] Public Law 95-604, 42 U.S.C. § 7901 *et. seq.*

[8] Prior to November 8, 1978 regulatory jurisdiction under the Atomic Energy Act was exercised, however, over the generation of the tailings on the premise that such generation was an integral part of the mill operation.

[9] 42 U.S.C. § 4321. The procedures and guidelines for these statements are set forth in 10 CFR Part 51 "Licensing and Regulatory Policy and Procedures For Environmental Protection".

non-agreement states under its licensing and regulation of source material authority in the Atomic Energy Act as supplemented by NEPA. However, since the mill tailings themselves were not material licensable by NRC once the underlying source material license for the processing of the uranium ore terminated, there was no longer any legal basis for further NRC regulatory control of the mill tailings. This was one of the problems addressed by the Congress in the UMTRCA. That Act specifically expanded the Commission's Jurisdiction in this area and established a comprehensive regulatory regime for the licensing and regulation of the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content.

It is from this historical perspective that we now turn to consider the question raised. We consider first the relevant authority available to the Commission under the Atomic Energy Act, as amended by the UMTRCA. Then we will examine the relevance of NEPA to the exercise of the NRC's licensing authority.

II. The Jurisdiction of the NRC Under the Atomic Energy Act of 1954

A. The Atomic Energy Act, prior to its amendment by the UMTRCA.

For purposes of analysis, we begin with the relevant provisions of the Atomic Energy Act, which were not

affected by the UMTRCA.[10] There is no reasonable basis to question the clear and long-exercised legal authority available to the NRC to license the processing of uranium ore which produces source material. In the exercise of this licensing authority, the NRC is authorized to "govern any activity authorized pursuant to [the Atomic Energy] Act . . . in order to protect health and to minimize danger to life or property." 42 U.S.C. § 2201i.(3). In addition, the Commission is authorized to "establish by rule, regulation, or order, such standards and instructions to govern the possession and use of . . . source material . . . as the Commission may deem necessary or desirable . . . to protect health or to minimize danger to life or property." 42 U.S.C. § 2201b.. Each license "shall be in such form and contain such terms and conditions as the Commission may, by rule or regulation, prescribe to effectuate the provisions of [the Atomic Energy] Act . . . " 42 U.S.C. § 2233. NRC may exercise this regulatory authority and control over all integral parts of an activity, such as the extraction of source material, for which an NRC license is required by the Atomic Energy Act.

This application of the source material licensing and regulatory authority of the Atomic Energy Act has been consistently followed by the NRC and its predecessor for years.[11]

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[10] For purposes of the analysis at this point, we exclude the obligations placed on NRC by NEPA. This matter is discussed subsequently, under Part III.

[11] See legal opinions which are printed in the hearings, "Uranium Mill Tailings Control Act of 1978," before the Subcommittee

B. The Atomic Energy Act as amended by the UMTRCA.

The UMTRCA established a remedial action program to stabilize and control uranium tailings at inactive mill sites as well as a program for the regulation of mill tailings during uranium or thorium ore processing at active mill operations.[12] Nowhere in the UMTRCA is there specific mention of in situ extraction. In fact, it appears that the authors of the UMTRCA were primarily concerned with the mill tailings and waste from conventional uranium milling techniques, rather than in situ operations.[13] Nevertheless, as we discuss below, the UMTRCA did reinforce the NRC's licensing and regulatory authority under the Atomic Energy Act in respects which are applicable both to conventional milling and to in situ processing of uranium or thorium ores to produce source material.

1. The Statutory Language

Section 201 of the UMTRCA amends section 11e of the Atomic Energy Act by expanding the definition of

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on Energy and Power, Committee on Interstate and Foreign Commerce, 95th Cong., 2d Sess., June 19, 20 and August 2, 1978, at pp. 204-207.

[12] UMTRCA, section 2, 42 U.S.C. § 7901 and H.Rep. 95-1480, Pt. 2 at 25, 29 (1978). Title I of the UMTRCA is concerned with the remedial action program for inactive mill sites, and Title II with uranium mill tailings licensing and regulations.

[13] See H.Rep. 95-1480, Pt. 2, at 25, 29 (1978), which discusses the hazards associated with the enormous tailings piles generated in conventional milling operations.

byproduct material, a material over which the NRC clearly has licensing and regulatory jurisdiction under the Atomic Energy Act (Section 81, 42 U.S.C. § 2111), to include:[14]

> the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content.

A literal reading of this definition would encompass the above-ground wastes produced by any processing of ore primarily for its source material content. The scant legislative history which is pertinent supports this conclusion. (*infra.*, p. 11).[15]

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[14] Section 11e.(2), 42 U.S.C. § 2014e.(2).

[15] For purposes of this analysis, there is no need to consider the question of whether the depleted underground ore bodies left over from in situ leaching fall within the definition of tailings or waste. An earlier staff analysis concluded that the UMTRCA does not appear to require regulation of the subterranean ore bodies depleted by the in situ extraction process. See memorandum from Howard K. Shapar to the Commission, dated May 7, 1979. This memorandum also concluded, consistent with the text of this analysis, that the definition of byproduct material in the UMTRCA covers the management of the wastes from in situ extraction that occur above ground (including such wastes before they are re-injected). Regulatory authority over the surface material is a sound legal basis for imposing license conditions dealing with the possible contamination of groundwater by residues from that material or from the in situ operations.

The NRC's definition of section 11e.(2) byproduct material is consistent with the foregoing. 10 CFR § 40.4(a-1) (1979). The regulatory definition repeats the statutory definition in section 11e.(2) and adds these words "including discrete surface wastes resulting from uranium solution extraction processes. Underground ore

The UMTRCA also amended the Atomic Energy Act by adding a new section 84 (42 U.S.C. § 2114) which gives the NRC unambiguous regulatory authority over the nonradiological as well as the radiological hazards associated with the processing, possession and transfer of tailings or wastes as defined in section 11e.(2) of that Act.[16] The exercise of this authority must conform with the applicable general standards published by the Administrator of the Environmental Protection Agency (EPA) under new section 275 which was also added to the Atomic Energy Act by the UMTRCA.[17] Moreover, the Commission must assure that its general requirements for the management of tailings or wastes (as defined in section 11e.(2)) are, to the maximum extent practicable, at least comparable to requirements applicable to the possession, transfer, and disposal of similar hazardous material regulated by the Administrator

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bodies depleted by such solution extraction operations do not constitute 'byproduct material' within this definition." This definition could, of course, be revised if necessary to cover specifically the possible contamination of groundwater from in situ operations.

[16] Section 84 provides in part: "a. The Commission shall insure that the management of any byproduct material, as defined in section 11e.(2), is carried out in such manner as –

> (1) the Commission deems appropriate to protect the public health and safety and the environment from radiological and nonradiological hazards associated with the processing and with possession and transfer of such material".

[17] 42 U.S.C. § 2014a.(2).

of EPA under the Solid Waste Disposal Act, as amended.[18]

The new Section 275 to the Atomic Energy Act provides, among other things, that the Administrator of EPA shall publish[19]

> standards of general application for the protection of the Public health, safety, and the environment from radiological and nonradiological hazards associated with the processing and with the possession, transfer, and disposal of byproduct material, as defined in section 11e.(2) of this Act, at sites at which ores are processed primarily for their source material content or which are used for the disposal of such byproduct material.

The UMTRCA also amended Section 274 of the Atomic Energy Act to provide for additional criteria for the discontinuance by the NRC of its regulatory responsibilities over byproduct material, as defined in section 11e.(2), and the assumption thereof by an Agreement State.[20] Although the Agreement State area itself is beyond the scope of this analysis, included in the

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[18] 42 U.S.C. § 2014a.(3).

[19] Section 275 was added to the Atomic Energy Act by Section 206 of the UMTRCA. The quoted language is from Section 275b.(1), 42 U.S.C. § 2022b.(1).

[20] Section 204 of the UMTRCA amended Section 274 of the Atomic Energy Act in several significant respects, the most relevant for present purposes being the additional [sic] of a new section 274o.

requirements which an Agreement State must satisfy for NRC's jurisdiction to be discontinued are:[21]

> [require] compliance with standards which shall be adopted by the State for the protection of the public health, safety, and the environment from hazards associated with such material which are equivalent, to the extent practicable, or more stringent than, standards adopted and enforced by the Commission and the Administrator of the Environmental Protection Agency . . . * * * and
>
> [require procedures which] * * * [22]
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> require for each license which has a significant impact on the human environment a written analysis * * * of the impact of such license, including any activities conducted pursuant thereto, on the environment, which analysis shall include – * * * *an assessment of any impact on any waterway and groundwater resulting from such activities.* (emphasis supplied).

2. The Legislative History

Colloquies during the floor debate in the Senate reveal an understanding, at least between the Senators involved, that the tailings or wastes from in situ operations ordinarily are covered by the regulatory program of NRC under the Atomic Energy Act as amended by

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[21] Section 274o.(2), 42 U.S.C. § 2021o.(2).

[22] Section 274o.(3)(c), 42 U.S.C. § 2021o.(3)(C)(ii).

the UMTRCA. In an exchange concerning in situ operations, Senators Wallop and Hart made it clear that in situ or solution extraction is within NRC jurisdiction, but may be appropriate for exemption from the land transfer requirements (Section 83) of the UMTRCA:

> Mr. WALLOP. Mr. President, I would like to obtain a clarification from the distinguished Senator from Colorado, the chairman of the Nuclear Regulation Subcommittee, of several points regarding title II of the bill as passed by the other body. First, I understand that the other body revised the bill to permit the Nuclear Regulatory Commission to exclude a uranium mill tailings disposal site from the requirement of a license if it determines that the site will not constitute an unreasonable risk to the public health and safety. This is the same discretionary authority now possessed by the Commission for other types of byproduct material. It occurs to me that this discretionary authority to grant exemptions from licensing would be particularly appropriate in the case of the so-called solution mining projects, in which uranium is brought to the surface by means of a fluid solution and is extracted with the remaining material pumped back below the surface. * * *
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> Mr. HART. The distinguished Senator from Wyoming is entirely correct on each of the points he raised. The licensing exemption authority for mill tailings disposal sites could be exercised for sites where uranium mining and extraction is limited to solution techniques. In

> fact, the Commission may well exercise this exemption authority for other disposal sites where such an exemption would not constitute an unreasonable risk to public health and safety. * * * [23]

Senators Hart and Wallop also engaged in a discussion to the effect that "so-called solution mining projects, in which uranium is brought to the surface by means of a fluid solution and is extracted with the remaining material pumped back below the surface, would not generally be considered for transfer status under the new section 83b" of the Atomic Energy Act, which generally requires government ownership of land and tailings upon termination of the milling operations. Senator Wallop expressed his understanding that such projects would not generally be considered for transfer status under section 83b. Senator Hart agreed, saying:[24]

> Contrasted with conventional mining and milling methods which cause significant surface disturbance and require extensive reclamation, solution mining techniques allow for the recovery of relatively small and widely scattered deposits of uranium with minimal disturbance of the land and provide for waste materials to be reinjected into the original locations below the land surface from which the uranium was removed. Therefore, the necessity of transferring surface and subsurface

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[23] Cong. Rec., daily edition, October 14, 1978, at p. S19037.

[24] Cong. Rec., daily edition, October 13, 1978, at p. S18748.

> title may not exist where uranium mining and extraction is limited to solution techniques.

These exchanges show that during the legislative process, these two Senators understood that the regulatory program established under the UMTRCA would apply to all aspects of in situ operations. These exchanges indicate that these Senators expected the NRC to regulate the wastes from in situ operations, but believed that the requirements (in Section 83) for the transfer to the government of tailings and their disposal site from such operations would at least appropriately be the subject of the license exemption authorized in section 83b.[25]

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[25] Section 83b. of the Atomic Energy Act provides in pertinent part that:

> The Commission shall require . . . that prior to the termination of any license [which results in the production of any byproduct material, as defined in Section 11e.(2)] . . . title to the land . . . shall be transferred to . . . the United States, or . . . the State in which such land is located, at the option of such States". . . . "Unless the Commission determines prior to such termination that transfer of title to such land and such byproduct material is not necessary or desirable to protect the public health, safety, or welfare or to minimize or eliminate danger to life or property."

Section 81 of the Atomic Energy Act (42 U.S.C. § 2111) authorizes the Commission to exempt certain classes or quantities of byproduct material" from the requirements for a license set forth [in Section 81] when it makes a finding that "the exemption . . . of such material . . . will not constitute an unreasonable risk to the common defense and security and to the health and safety of the public."

There is also legislative history which is relevant in another context for purposes of this analysis. Each of the House Committee reports on the UMTRCA take note of the NRC's use of NEPA in regulating uranium milling:

> "As already noted, the NRC now regulates these tailings at active mills indirectly through its licensing of source material milling under the Atomic Energy Act of 1954, largely as a result of the enactment of the National Environmental Policy Act of 1969.[26]
>
> The Commission, in keeping with its responsibilities and authorities under the Atomic Energy Act and the National Environmental Policy Act, is the lead agency in regulation, oversight, and management of uranium mill tailings-related activities.[27]

If byproduct material as defined in section 11e.(2) is exempted from licensing under Section 81, section 84 of that Act (42 U.S.C. § 2114) authorizes the Commission to require the persons, officers, or instrumentalities so exempted from licensing "to conduct monitoring, perform remedial work, and to comply with such other measures as it may deem necessary or desirable to protect health or to minimize danger to life or property. . . ."

[26] H. REP. 95-1480, Pt. 2, 95th Cong., 2d Sess., 28 (1978). There was no Senate Committee report on Title II (Uranium Mill Licensing and Regulations) of the UMTRCA. There is a Senate Committee Report (S.Rep. 95-1266, Oct. 3, 1978) on remedial action program for inactive sites, however.

[27] H. REP. 95-1480, Pt. 1, 95th Cong., 2d Sess., 15 (1978).

One of the committee reports goes even further, describing the NRC's environmental duties under the UMTRCA as follows:

> With respect to nonradiological matters, the NRC, through its environmental review under the NEPA mandate, would impose controls consistent with those imposed by EPA on similar materials contained in other solid wastes subject to EPA authority.[28]

III. NEPA Obligations

The NRC staff in its uranium mill (conventional and in situ) licensing actions has followed the practice of imposing conditions to mitigate health and environmental impacts as shown to be reasonably necessary by the environmental review process under NEPA. The imposition of such license conditions is an application of Commission Policy which is rooted in the interpretation of the obligations placed on NRC by NEPA. Prior to EPA the Commission's regulatory responsibility was essentially confined to scrutiny of and protection against hazards from radiation and did not encompass consideration of non-radioiogical environmental issues.[29] Passage of NEPA, however, made ". . . environmental protection a part of the mandate of every federal agency and department . . . [The Commission] is not only permitted, but compelled, to take

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[28] *Id.*, at 16.

[29] *New Hampshire* v. *A.E.C.*, 406 F.2d 170, 175 (1st Cir. 1969), *cert. denied*, 395 U.S. 962 (1969).

environmental values into account . . . " and to consider environmental issues just as it considers other matters within its mandate. *Calvert Cliffs' Coordinating Committee* v. *A.E.C.*, 449 F.2d 1109, 1112 (D.C. Cir. 1971).

Shortly after the *Calvert Cliffs'* decision, the Commission issued new NEPA regulations which, in pertinent part, required the preparation of an environmental impact statement for each uranium mill licensed by it. The basic issue, for purposes of this analysis, is whether NEPA authorizes the Commission to exercise the regulatory power it unquestionably has – the power to license and regulate in situ operations in a fashion that will minimize to the extent practical the adverse environmental impacts which could result by the contamination of groundwater from such operations.[30] This issue must be resolved in the affirmative under the leading judicial interpretations of NEPA.

Section 102 of NEPA, 42 U.S.C. § 4332, is a direction to all agencies that " . . . to the fullest extent possible . . . the policies, regulations and public laws of the United States shall be interpreted and administered in accordance with the policies [of NEPA]." The Supreme

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[30] The Commission, as stated previously in the text, has statutory authority to condition its licenses, 42 U.S.C. § 2233. Implicit in the power to issue a license is the power to issue the license with reasonable conclusions.

Regulations of the Council on Environmental Quality (CEQ) on "Implementing National Environmental Policy Act Procedures," provide that the "lead agency shall include appropriate conditions in . . . permits or other approvals." (40 C.F.R. § 1505.3).

Court stated in *Kleppe* v. *Sierra Club*, 427 U.S. 390, 409 (1976) that:

> . . . NEPA announced a national policy of environmental protection and placed a responsibility upon the Federal Government to further specific environmental goals by 'all practicable means, consistent with other essential considerations of national policy.' NEPA § 101(b), 42 U.S.C. 4331(b).

As Judge Wright said in *Calvert Cliffs'*, 449 F.2d *supra* at 1128: "Clearly, it is pointless to 'consider' environmental costs without also considering action to avoid them." If the Commission is to administer the Atomic Energy Act, as amended, in accordance with the "national policy of environmental protection", *Kleppe*, *supra.*, then it must have the authority to use its license conditioning power when necessary to protect the environment just as even, prior to NEPA, it used that power to protect against threats to radiological safety. Cf. *Calvert Cliffs'*, *supra*.

Where, as here, an agency has a "jurisdictional toehold"[31] over a licensed activity, its authority to use that

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[31] These words were used by Judge Leventhal in *Henry* v. *F.P.C.*, 513 F.2d 395, note 33 on p. 407 (D.C. Cir. 1975). In *Henry*, the "jurisdictional toehold" was based on F.P.C. jurisdiction over a tap and value interconnection. By contrast, the NRC exercises licensing and regulatory jurisdiction over in situ operations which produce source material and section 11e.(2) byproduct material. Thus, the decision in *Kitchen* v. *F.C.C.*, 464 F.2d 801 (D. C. Cir. 1972) which deals with a matter (telephone exchange building) over which the FCC had never exercised regulatory jurisdiction is clearly inapposite here.

power to protect the environment has been unequivocally recognized by the courts. For example, in *Henry* v. *F.P.A.*, *supra*. at 406-407, a case in which the F.P.C. (now FERC) had such a "jurisdictional toehold", Judge Leventhal wrote:

> NEPA requires an integrated view of the environmental damage that may be caused by a situation, broadly considered, and its purpose is not to be frustrated by an approach that would defeat a comprehensive and integrated consideration by reason of the fact that particular . . . agencies have particular occasions for and limits on their exercise of jurisdiction.
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> * * *
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> What is required is that the FPC, in deciding whether to grant, deny or condition certificates of public convenience and necessity for admittedly jurisdictional facilities, take into account the environmental costs of the gasification projects as a whole.

Similarly. the First Circuit decision in *Public Service Co.* v. *N.R.C.*, 582 F.2d 77 (1st Cir. 1978) is in point. The utility in that proceeding challenged the propriety of NRC's order to reroute transmission lines. The court, after agreeing that the Commission had the requisite jurisdiction (under the Atomic Energy Act) over the transmission lines, *Public Service Co.*, *supra*., note 7 at 81, and 85), rejected the view that NEPA permitted the Commission to consider the environmental impacts of various transmission lines routes, without acting to

minimize those impacts. (*Id.*, note 17 at 85). The Court said in this regard (*Id.*, at 85-86):

> Once having found that the Commission has jurisdiction over the transmission lines, we think it clear that, under the dictates of NEPA, it was obliged to minimize adverse environmental impact flowing therefrom. * * * The Commission has statutory authority to condition licenses. * * * In this instance, the Commission used one of its statutory powers in the furtherance of NEPA, whose mandate the Commission must follow. The Commission is under a dual obligation: to pursue the objectives of the Atomic Energy Act and those of the National Environmental Policy Act. 'The two statutes and the regulations promulgated under each must be viewed in *para* (sic) *materia*' *Citizens for Safe Power* v. *NRC*, 524 F.2d 1291, 1299 (C.A.D.C., 1975).

IV. Conclusion

The NRC has licensing and regulatory jurisdiction under the Atomic Energy Act over in situ operations which produce source material. Under that Act, as amended, by the UMTRCA, the Commission has the responsibility and authority to assure that byproduct material as defined in section 11e.(2), (i.e. tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content), is managed so as to protect the public health and safety and the environment from radiological and nonradiological hazards

associated with the processing and with the possession and transfer of such material. Potential contaminants of groundwater resulting from in situ operations are clearly within the scope of the NRC's regulatory control under the Atomic Energy Act, as amended, by the UMTRCA. Moreover, this regulatory authority reinforces the NEPA authorization and directive for the Commission to exercise its licensing and regulatory authority in a fashion that will minimize to the extent practical the adverse environmental impacts resulting from the activities which it licenses, one of which is in situ operations.

In view of the foregoing, the NRC is authorized to impose conditions in a license for the in situ extraction of source material for the purpose of controlling possible contamination of groundwater from residues which are an integral part of that licensed operation.

ATTACHMENT B

THE EXTENT OF PREEMPTION OR CONCURRENT JURISDICTION OVER URANIUM MILL TAILINGS IN NON-AGREEMENT STATES

Introduction and Overview

The question has arisen as to whether non-Agreement State authority over the non-radiological hazards of uranium mill tailings has been preempted by the Federal Government and, if not, what, if any, authority regarding the regulation of tailings is shared between the NRC and the non-Agreement States. These

questions have not been comprehensively addressed by the NRC since the passage of the Uranium Mill Tailings Radiation Control Act of 1978.[1] The extreme complexity of the issue has been compounded by the passage of the so-called remedial amendments to the Mill Tailings Act[2] which, while clarifying that NRC was not to have concurrent jurisdiction with Agreement States during the three-year period before all the Act's provisions become fully effective, served to further confuse the situation with respect to non-Agreement States. The impetus for the present analysis is the recent discussion, in a series of meetings and letters, with the Governor and other officials of the State of Wyoming regarding the appropriate regulatory role of the State versus that of the NRC and the reestablishment of a cooperative working relationship between the two.[3]

The scope of this analysis is limited to authority to regulate non-radiological hazards of mill tailings since there appears to be neither confusion nor controversy about the clear intent of Congress, as expressed in the Atomic Energy Act of 1954, as amended by the Mill

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[1] Pub. L. No. 95-604, 92 Stat. 3021 (1978) (hereinafter "Mill Tailings Act").

[2] Pub. L. No. 96-106, 122.93 Stat. 799 (1979).

[3] Worthy of particular note are the February 27, 1980 letter from Governor Herschler to Chairman Ahearne and the December 1, 1979 memorandum to Governor Herschler from Wyoming Attorney General John D. Troughton, entitled "Proposed DEQ Regulations on Mill Tailings and In Situ Mining – Jurisdiction of DEQ Relative to that of NRC" (hereinafter. "Opinion of the Wyoming Attorney General").

Tailings Act, to provide for an exclusive federal regulatory role over the radiological hazards of uranium mill tailings. Though our analysis diverges from that of the Wyoming Attorney General on other issues, there is complete agreement on this point.

This memorandum is organized to present first a discussion, in summary form, of the preemption doctrine in order to provide an analytical framework. This is followed by a detailed discussion of those provisions of the Atomic Energy Act and the Mill Tailings Act which must be interpreted in order to reach a conclusion as to whether there is preemption or concurrent jurisdiction over the nonradiological hazards of uranium mill tailings. Finally, we conclude that the question is so close that the Commission could reasonably choose either interpretation, but that the better legal view is that non-Agreement States and the NRC have concurrent jurisdiction to regulate the non-radiological hazards of mill tailings, both before and after the November 8, 1981 date upon which the Mill Tailings Act becomes fully effective. As will be shown, the case for concurrent jurisdiction before November 8, 1981 is based upon express Congressional preservation of state authority; after that date it is based on absence of indications that Congress intended to "occupy the field" so completely as to preclude the possibility of concurrent state regulation. Even where there is concurrent jurisdiction, particular state regulation must, of course, give way to federal authority in the event of conflict such that "compliance with both federal and state regulations is a physical impossibility." *Florida*

Lime & Avocado Growers, Inc. v. *Paul*, 373 U.S. 132, 142-43 (1963).

The Preemption Doctrine[4]

The doctrine of preemption is based on Article VI of the Constitution, Clause 2, which elevates federal law above that of the states. It provides:

> This Constitution, and the Laws of the United States which shall be made in Pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land; and the Judges in every State shall be bound thereby, any Thing in the Constitution or Laws of any State to the Contrary notwithstanding.

Conversely, however, since the Federal Government is one of limited powers, the Tenth Amendment to the Constitution preserves to the states all powers not specifically delegated to the United States nor expressly prohibited to the states. Accordingly, the starting point in any preemption analysis must be whether the Congressional enactment providing for federal regulation in a particular field has been undertaken pursuant to the powers delegated to the United States by the

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[4] The doctrine of preemption is firmly established in a long line of decisions of the Supreme Court. No attempt is made to cite them here. For simplicity, the overview presented here is freely paraphrased from the comprehensive summary of Supreme Court precedent set forth in *Northern States Power* v. *Minnesota*, 447 F.2d 1143 (8th Cir. 1971), aff'd mem. 405 U.S. 1035 (1972).

Constitution. Since the instant memorandum is prompted by confusion as to the proper interpretation of the Mill Tailings Act rather than its validity, this point need not be discussed further. In any event, it appears clear that the constitutional power to regulate interstate commerce provides adequate authority for federal regulation of uranium milling and mill tailings.

Having established that the Federal Government has the power to regulate in a given area, the inquiry must focus upon whether Congress has acted in a manner so as to exclude the states from asserting concurrent jurisdiction over the same subject matter. At the outset it should be understood that the existence of concurrent jurisdiction means that the states may regulate the very same subject as the Federal Government, i.e., the nonradiological hazards of uranium mill tailings. This may be by imposition of standards more demanding (but not inconsistent with) minimum federal standards or by regulation of aspects of the subject not addressed by the federal scheme. Concurrent jurisdiction can exist only if "both regulations can be enforced without impairing the federal superintendence of the field." *Florida Lime & Avocado Growers, Inc.* v. *Paul*, 373 U.S. 132, 142 (1963).

In cases where states have attempted to exercise concurrent jurisdiction the first question is whether the two regulatory schemes present irreconcilable conflict. As previously noted, state regulation must give way in the face of such conflict. In the instant situation, this inquiry too may be bypassed because the problem is one of anticipation – is there room for the

non-Agreement States[5] to assert regulatory authority over the non-radiological hazards of uranium mill tailings in a manner which does not conflict with the Mill Tailings Act and the NRC regulations promulgated under that Act.[6]

In the absence of inevitable collision between state and federal regulatory schemes. it must be determined whether Congress has manifested an intention to exclude the possibility of concurrent state regulation. The Mill Tailings Act does not contain language of "express preemption.[7] Of course, if language expressly

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[5] This paper focuses on the situation in non-Agreement States. In Agreement States no doubt remains as to the preemption/concurrent jurisdiction status. By virtue of the 1979 "remedial amendments" to the Mill Tailings Act it is clear that Agreement States have exclusive authority over all aspects of uranium mill tailings regulation until November 8, 1981 (though they must meet the requirements of section 274o. of the Atomic Energy Act as amended to the extent practicable" during this period). Thereafter, if these states have entered into amended agreements in accordance with the Mill Tailings Act, they will retain the exclusive authority (subject to the conditions of section 274o.). Should they elect not to assume the exclusive Agreement State authority over mill tailings, (i.e., not amend their agreements), they would stand in the same position as non-Agreement States insofar as regulation of mill tailings is concerned

[6] To date, the process of development of NRC regulations to implement the Mill Tailings Act has focused largely on the radiological hazards of mill tailings.

[7] An example of such preemptive language is found in section 106(d) of the Marine Protection, Research, and Sanctuaries Act of 1972, 33 U.S.C. § 461(d) (1976), which states:

after the effective date of this subchapter, no State shall adopt or enforce any rule or regulation relative to any activity regulated by this subchapter.

preserving state authority were contained in the Mill Tailings Act, the inquiry would also be at an end for there would clearly be no preemption. Whether or not such language is found or remains in the Atomic Energy Act and the Mill Tailings Act as both have been amended is a close question of the proper interpretation of those acts, including particularly § 204(h)(1) of the Mill Tailings Act as amended, which will be discussed below.

Assuming that Congress has neither expressly preserved nor expressly prohibited the exercise of state authority over a given subject matter, federal preemption may be implied in certain circumstances. Thus, the ultimate question to be answered in this memorandum is this: Does the Mill Tailings Act impliedly preempt non-Agreement State regulation of the non-radiological hazards of uranium mill tailings (a matter clearly subject to NRC regulation), or are these non-Agreement States free to exercise concurrent jurisdiction to the extent that their laws and regulations are consistent with those of the Federal Government?

Any discussion of the doctrine of implied preemption should be prefaced with the caveat that this is an extremely confusing area of law. In discussing the issue with regard to preemption in the nuclear field, one commentator stated:

> Although the general criteria for finding preemption are easily stated, the application to particular cases has been, to say the least, variable. Among other things, the decisions display inconsistent treatment of the degree

> of conflict necessary to support a finding of preemption and reliance on a broad range of presumptive factors – for example, the pervasiveness of the federal scheme of regulation, the dominance of the national interest in a particular field of regulation, and the possibility that that state law might produce a result inconsistent with the federal statute – as the basis for an inference that Congress intended to occupy a field to the exclusion of state authority. In one class of cases of particular interest here, involving state statutes designed to protect public health and safety, the Court has reiterated the now familiar maxim that a federal statute will not be deemed to preempt state action unless there is a direct conflict or a clearly mainfested congressional intent to that effect.[8]

Although the tests for implied preemption are summarized in any number of Supreme Court cases,[9] a clear and concise summary appears in the 8th Circuit's decision in Northern States Power, dealing with preemption in the nuclear field:

> Key factors in the determination of whether Congress has by implication, preempted a particular area so as to preclude state attempts

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[8] Murphy & La Pierre, nuclear "Moratorium" Legislation in the States and the Supremacy Clause: A Case Of Express Preemption 75-76 (Atomic Industrial Forum, Inc., November 1975) (footnotes omitted).

[9] *See, e.g.*, Rice v. Santa Fe Elevator Corp., 331 U.S. 218 (1947); Ray v. Atlantic Richfield Co., 435 U.S. 151 (1978).

> at dual regulation include, inter alia: (1) the aim and intent of Congress as revealed by the statute itself and its legislative history . . . ; (2) the pervasiveness of the federal regulatory scheme as authorized and directed by the legislation and as carried into effect by the administrative agency. . . . ; (3) the nature of the subject matter regulated and whether it is one which demands "exclusive federal regulation in order to achieve uniformity vital to national interests." . . . ; and ultimately (4) "whether, under the circumstances of [a] particular case [state] law stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress."[10]

A finding of Federal preemption is the exception rather than the rule[11] and the exercise of Federal supremacy is not lightly to be presumed.[12] As a general rule, "conflicting law, absent repeal or exclusivity provisions, should be pre-empted . . . 'only to the extent necessary to protect the achievement of the aims of'" the federal law, since "the proper approach is to reconcile 'the operation of both statutory schemes with one another rather than holding [the state scheme] completely

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[10] Northern State. Power Co. v. Minnesota, 447 F.2d 1143, 1146 (8th Cir. 1971) (footnotes omitted).

[11] Cosmetic, Toiletry and Fragrance Assoc. v. Minnesota, 440 F.Supp. 1216, 1220 (D. Minn. 1977).

[12] Schwartz v. Texas, 344 U.S. 199, 202-203 (1952).

ousted.'"[13] This approach is especially appropriate where the State authority subject to preemption is an exercise of the "historic police powers of the State," such as those powers designed to protect the public health, safety, or welfare.[14]

In this connection, it must be noted that State police powers to regulate environmental hazards and protect water supplies have been given considerable deference in Federal law. Various Federal statutes have given express deference to State laws concerning water allocation.[15] The courts have also recognized that the States have a legitimate police power interest in environmental matters.[16] The States' inherent authorities concerning matters regarding water quality and supply is of special significance in the arid Western States where uranium milling occurs. Wyoming, for instance, views itself as the trustee of the State's waters for the people.[17] State authority of this nature will not be

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[13] Merrill, Lynch, Pierce, Fenner & Smith v. Ware, 414 U.S. 117, 127 (1973), *quoting* Silver v. New York City Stock Exchange, 373 U.S. 341 (1963).

[14] *See, e.g.*, Rice v. Santa Fe Elevator Corp., 331 U.S. 218 (1977); Kelly v. Washington, 302 U.S. 1, 10 (1937); Cloverleaf Butter Co. v. Patterson, 315 U.S. 148, 162 (1942); Florida Avocado Growers v. Paul, 373 U.S. 248, 259 (1963).

[15] *See, e.g.*, 43 U.S.C. §§ 383, 617 (1976).

[16] *See, e.g.*, Askew v. American Waterways Operators, 411 U.S. 325 (1973); Steuart Transportation Co. v. Allied Towing, 12 ERC 2035 (8th Cir. 1979); Exxon v. New York City, 372 F.Supp. 335 (S.D. N.Y. 1974).

[17] Hunziker v. Knowlton, 322 P.2d 141, 78 Wyo. 241, *reh. den.* 324 P.2d 266, 78 Wyo. 241.

preempted unless there is clear and manifest Congressional intent to do so.[18]

NRC/AEC Statutory Authority with respect to Uranium Mill Tailings

a. The Atomic Energy Act

Prior to enactment of the Mill Tailings Act, the Commission's authority over uranium milling was limited to licensing the source material produced in the milling process. Regulatory authority was asserted over the generation of tailings because it was an integral part of the milling process,[19] but no other authority to

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[18] De Canas v. Dica, 424 U.S. 351, 357 (1976); *see also*, Jones v. Rath Packing Co., 430 U.S. 519, 525 (1977); Rice v. Santa Fe Elevator Corp., 331 U.S. 218, 230 (1977). *See generally*, Catz & Leonard, *The Demise of the Implied Preemption Doctrine*, 4 HASTINGS CONST. L.Q. 295 (1977).

[19] The Commission relied upon subsections 161b. and i.(3) of the Atomic Energy Act of 1954 to impose conditions upon the uranium miller's license to receive and transfer source material. Specifically, these provisions authorize the Commission to:

> b. establish by rule, regulation, or order, such standards and instructions to govern the possession and use of special nuclear material, source material, and byproduct material as the Commission may deem necessary or desirable to promote the common defense and security or to protect health or to minimize danger to life or property.
>
> f. prescribe such regulations or orders as it may deem necessary . . . (3) to govern any activity authorized pursuant to the Act, including standards and restrictions governing the design, location, and operation of facilities used in the conduct of

regulate uranium mill tailings was claimed by the Commission. In a memorandum dated December 7, 1960, the AEC's Acting General Counsel explored the issue of Commission jurisdiction over uranium mill tailings under the Atomic Energy Act of 1954. The thrust of this memorandum was that any potential health hazards posed by tailings would be attributable to the radium content – not the "unimportant"[20] quantities of uranium or thorium present in the tailings.[21] Since the Commission has no authority to regulate radium in the tailings, the net result was the [sic] there was no AEC regulation of uranium mill tailings.

As the NRC became increasingly concerned with the potential hazards of uranium milling and mill tailings, however, it began to take a more agressive role in regulating these matters[22] in implementation of its

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such activity, in order to protect health and to minimize danger to life or property.

[20] Section 62 of the Atomic Energy Act of 1954 provides that " . . . licenses shall not be required for quantities of source material which, in the opinion of the Commission, are unimportant."

[21] This memorandum (and a related one) were adopted as the position of a subsequent AEC general counsel in 1971, and are reprinted in *Use of Uranium Mill Tailings for Construction Purposes; Hearings Before the Subcomm. on Raw Materials of the Joint Comm. on Atomic Energy*, 92d Cong., 1st Sess. 19 *et seq.* (1971).

[22] *See e.g.*, U.S. NUCLEAR REGULATORY COMMISSION, FUEL PROCESSING AND FABRICATION BRANCH, BRANCH POSITION ON URANIUM MILL TAILINGS MANAGEMENT (May 13, 1977); U.S. NUCLEAR REGULATORY COMMISSION, ASSESSMENT OF ENVIRONMENTAL IMPACTS OF URANIUM MILLS IN AGREEMENT STATES, 43 Fed. Reg. 17,879 (April 26, 1978).

responsibilities under the National Environmental Policy Act of 1969. At the time the Mill Tailings Act was passed, a cognizant congressional committee noted:

> . . . [T]he NRC now regulates these tailings at active mills indirectly through its licensing of source material milling under the Atomic Energy Act of 1954, largely as a result of the enactment of the National Environmental Policy Act of 1969.[23]

Once the active milling operations ceased and the underlying Commission source material license was terminated, there was "no longer a 'clear legal basis for further Commission regulatory control of the mill tailings', according to Dr. Hendrie", Chairman of the NRC.[24]

b. The Mill Tailings Act

The Mill Tailings Act was intended to fill this regulatory gap.[25] Title II strengthens both the NRC and the Agreement State regulatory requirements regarding uranium milling and mill tailings. This title of the Mill

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See also, memorandum from Howard K. Shapar, Assistant General Counsel, Licensing and Regulation to John A. McBride, Director, Division of Materials Licensing, entitled "Commission's Regulatory Authority over Uranium Mill Tailings" (September 22, 1965).

[23] H.R. REP. NO. 95-1480, Pt. 2, 95th Cong., 2d Sess. 28 (1978).

[24] *Id.*, at 29.

[25] *See* H.R. REP. NO. 95-1480, Pt. I, 95th Cong. Sess. 12 (1978).

Tailings Act amends the Atomic Energy Act of 1954 to provide direct NRC authority over uranium mill tailings and wastes, now defined as "byproduct material" under section 11e.(2) of the Atomic Energy Act.[26] Other salient provisions of title II include a scheme for Federal or State ownership of tailings disposal sites once milling activities cease, authority for the NRC to require bonding or other financial surety to ensure stabilization and reclamation of tailings and milling sites by its milling licensees, and the concept of national minimum standards for tailings management and disposal to be established by NRC and EPA and to apply in both Agreement and non-Agreement States.

Section 201 of the Mill Tailings Act amends section 11e. of the Atomic Energy Act of 1954 by adding a new category of byproduct material: "the tailings or wastes produced by the extraction or concentration of uranium or thorium primarily for its source material content."[27] In essence, this expanded definition operates to place uranium mill tailings and wastes into the existing regulatory scheme in the Atomic Energy Act of 1954. Section 81 of that Act, as amended, provides that –

> [n]o person may transfer or receive in interstate commerce, manufacture, produce, transfer, acquire, own, possess, import, or export any byproduct material, except to the extent authorized by this section [authorizing

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[26] 42 U.S.C.A. § 2014(e)(2) (1979).

[27] *Id.*

> Commission licenses or exemptions], section 82 [governing exports], and section 84 [covering milling and mill tailings].[28]

The definition of section 11e.(2) byproduct material focuses on "tailings or wastes produced by the extraction or concentration of uranium, or thorium from an ore processed *primarily for its source material content*"[29] so as to exclude from NRC regulation mill tailings that contain uranium produced as a side stream of an operation primarily intended to extract a mineral other than uranium.[30]

The scope of NRC's regulatory responsibility over section 11e.(2) byproduct material is pervasive, as indicated by reference to the operative provisions of the Mill Tailings Act. Section 205 of that Act adds a new section 84 to the Atomic Energy Act of 1954, outlining "Authorities of Commission Respecting Certain Byproduct Material." Under this section, the Commission must insure that the management of section 11e(2) byproduct material is "carried out in such a manner as . . . the Commission deems appropriate to protect the *public health and safety and the environment from radiological and nonradiological hazards* associated with

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[28] 42 U.S.C.A. § 2111 (1979).

[29] 42 U.S.C.A. § 2014(e)(2) (1979) (emphasis added).

[30] As discussed in the accompanying memorandum regarding in-situ extraction of uranium, the Commission's regulations further delimit the definition of section 11e(2) byproduct material to include discrete surface wastes resulting from uranium solution extraction processes, but to exclude underground ore bodies depleted by such solution extraction operations. 10 CFR § 40.4(a-1).

the processing and with the possession and transfer of such material," (emphasis added) and conforms to the general standards for tailings management prescribed by the EPA and the Commission.[31]

Significantly, this marks the first time the Atomic Energy Act of 1954, as amended, gives the Commission specific authority over nonradiological and environmental matters.[32] Prior to enactment of the Mill Tailings Act, NRC authority under the Atomic Energy Act of 1954 had been limited to radiological, public health and safety, common defense and security, and antitrust matters, although the agency was, of course, required to consider nonradiological issues pursuant to the National Environmental Policy Act of 1969.[33] The proposed regulations implementing the Mill Tailings Act do not at this time focus heavily on nonradiological environmental concerns. The regulations rather emphasize traditional Commission concerns, such as radon emanation from the tailings or wastes, but do to a lesser extent address certain newer areas of interest, such as seepage of toxic materials into groundwater.[34]

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[31] 42 U.S.C.A. § 2022(d) (1979).

[32] Prior to the enactment of NEPA, it was held that the AEC lacked statutory authority under the Atomic Energy Act of 1954 to deny or condition licenses on nonradiological environmental grounds. New Hampshire v. AEC, 406 F.2d 120 (1st Cir. 1969), *cert. den.* 395 U.S. 962 (1969).

[33] Calvert Cliffs' Coordinating Committee v. AEC, 449 F.2d 1109 (D.C. Cir.) *cert. den.* 404 U.S. 942 (1971).

[34] 44 Fed. Reg. 50,021 (1979), proposing a new Appendix A to 10 C.F.R. Part 40.

It should be noted that the role of other agencies in the regulation of the environmental hazards associated with uranium milling and mill tailings is not affected. Section 275e. of the Atomic Energy Act of 1954 (added by the Mill Tailings Act) provides:

> Nothing in this Act applicable to byproduct material, as defined in section 11e.(2) of this Act, shall affect the authority of the Administrator under the Clean Air Act of 1970, as amended, or the Federal Water Pollution Control Act, as amended.

Under these acts the EPA Administrator is empowered to authorize state implementation and enforcement of certain provisions of these acts. There is no indication of intent in the legislative history of the Mill Tailings Act to take away this authority of the Administrator.[35]

Thus, EPA, and the states which administer these acts, retain permitting and regulatory authority over air or water pollutants emitted by uranium milling operations or tailings to the same extent as before passage of the Mill Tailings Act.

The NRC and the EPA are to set national Federal standards applicable in both Agreement States and non-Agreement States.[36] The legislative history of the Act indicates that the intent is to insure that –

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[35] Indeed, the ultimate committee report stresses that the Mill Tailings Act is not to affect the applicability of any of the environmental laws. H. R. REP. NO. 95-1480, Pt. 2, 95th Cong., 2d Sess. 46 (1978).

[36] 42 U.S.C.A. §§2114, 2022, 2021(o) (1979).

> . . . mills located in a non-Agreement State are not subject to different requirements than their competitors which are located in an Agreement State.[37]

To this end, the Agreement States must also, when issuing uranium milling or mill tailings licenses or regulations, follow procedures comparable to those of the NRC.[38] Similarly, Agreement State financial surety requirements applied to milling licensees must be sufficient to ensure compliance with those standards established by the Commission.[39]

Another, possibly more significant, indicator of the NRC's predominance in the area of uranium milling and mill tailing regulation is the NRC's retention of authority over certain aspects of long term tailings management in Agreement States. This retention of authority over materials under Agreement State regulation is a marked departure from the Agreement State program as originally enacted, which envisaged a clear separation of Commission and Agreement

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[37] H.R. REP. NO. 95-1480, Pt. 2, 95th Cong., 2d Sess. 45 (1978).

[38] 42 U.S.C.A. §§ 2021(o)(1-3) (1979). The procedures include steps to enhance public participation and an environmental review. Under 42 U.S.C.A. § 2021(j) (1979), the NRC must undertake periodic reviews to ensure that the Agreement States are complying with these requirements, and a State's failure to comply may mean termination or suspension of all or part of its agreement.

[39] 42 U.S.C.A. §2201(x) (1979).

State authority.[40] Under sections 83c. and 275c. of the Atomic Energy Act of 1954, as amended by the Mill Tailings Act, before any uranium milling license (including an Agreement State license) may be terminated, the NRC must have first made a determination that all applicable requirements pertaining to tailings stabilization and decontamination have been met.[41] Moreover, under sections 83a. and b., the following authority is reserved to the Commission after November 8, 1981: (1) the authority to establish such terms and conditions as the Commission determines necessary to assure that the licensee complies with decontamination, decommissioning, and reclamation standards the Commission may establish;[42] (2) the authority to require transfer of title of the tailings and their disposal site to the Federal or, at the option of the State, State government;[43] (3) the authority to permit use of surface or subsurface estates, or both, of land transferred to the United States or a State;[44] (4) the authority to

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[40] According to the legislative history of the 1959 amendments to the Atomic Energy Act of 1954 establishing the Agreement State program,

> It is not intended to leave any room for the exercise of dual or concurrent jurisdiction by States to control radiation hazards by regulating byproduct, source, or special nuclear materials. The intent is to have the material regulated either by the Commission, or by the State and local government, but not by both. S. REP. No. 870, 86th Cong., 1st Sess. 9 (1959).

[41] 42 U.S.C.A. §§ 2113(c), 2021(c) (1979).

[42] 42 U.S.C.A. § 2113(a)(1) (1979).

[43] 42 U.S.C.A. § 2113(b)(1) (1979).

[44] 42 U.S.C.A. §§ 2113(b)(1,7) (1979).

require transfer of tailings and their disposal site connected with a mill that was in operation before the effective date of the land transfer requirements of section 83 of the Atomic Energy Act of 1954;[45] (5) the authority to require the Federal agency or State having custody of the tailings and their disposal site to under take monitoring, maintenance, and emergency measures as the Commission may deem necessary;[46] and (6) the authority to enter into arrangements to ensure that tailings on Indian lands are properly monitored and maintained.[47]

What, if any, authority to regulate the non-radiological hazards of uranium mill tailings has been left to non-Agreement States

a. The situation before November 8, 1981

The foregoing discussion makes clear that Congress intended the Federal Government to assume a pervasive and preeminent role with regard to the hazards of uranium mill tailing [sic] – both radiological and non-radiological. The question of implied preemption then turns upon whether this role established for the Federal Government so completely "occupies the field"[48] as

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[45] 42 U.S.C.A. § 2113(b)(4) (1979).

[46] 42 U.S.C.A. § 2113(b)(5) (1979).

[47] 42 U.S.C.A. § 2113(b)(8) (1979).

[48] The implied preemption standard of "occupancy of the field" (see, e.g., Flordia [sic] Lime and Avocado Growers, Inc. v. Paul, 373 U.S. 132, 135 (1963)) is measured by the more detailed factors set forth in cases such as Northern States Power v. Minnesota, 447 F.2d 1143 (8th Cir. 1971). See pp. 3-8, *supra*.

to leave no room for concurrent non-Agreement State regulation. Before attempting to reach a conclusion on this, we will first examine the available indicia as to whether Congress intended to preserve or preclude non-agreement state authority. Because one of the key (and most confusing) factors – section 201(h)(1) of the Mill Tailings Act as amended – applies only until November 8, 1981, the situation must be examined separately for the periods before and after that date.

It should be noted at the outset that the authors of the Mill Tailings Act were generally careful to identify Agreement States when they wished to distinguish between Agreement and non-Agreement States. For example, section 275d. of the Atomic Energy Act of 1954[49] as added by the Mill Tailings Act, refers to "States exercising authority pursuant to section 274b.(2) of this Act." By implication, the failure to identify a provision as applying only to Agreement States means that reference to "a State" or "any State" means just what it says – either an Agreement or a non-Agreement State.[50]

It appears that certain authorities *are* available to any State under the Mill Tailings Act. As described above, limitations on exclusive NRC authority leave room for State regulation. The most salient of these limitations is the definition of byproduct material in section 11e.(2), which leaves to the States the regulation of

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[49] 42 U.S.C.A. § 2022(d) (1979).

[50] *See* 2A Sutherland, STATUTORY CONSTRUCTION, § 47.23 (4th ed., C.D. Sands 1975).

tailings or wastes produced by the extraction or concentration of uranium or thorium from ore *not* processed primarily for its source material content, and allows the State authority over below-ground (e.g., mining) aspects of in situ extraction. Also, by virtue of section 275e. of the Atomic Energy Act of 1954,[51] as added by the Mill Tailings Act, States may continue to exercise whatever authority they have to administer certain provisions of the Clean Air Act or the Federal Water Pollution Control Act.

Other authorities appear to be generally available to the States under the Mill Tailings Act. Under section 83(b)(1) of the Atomic Energy Act of 1954,[52] as added by the Mill Tailings Act, a State – apparently Agreement or non-Agreement – may opt to take custody of tailings and their disposal site. Similarly, under section 161x. of the Atomic Energy Act of 1954,[53] as added by the Mill Tailings Act, the NRC must, when imposing financial surety requirements, take into consideration "other financial arrangements which are required by other Federal agencies or *State agencies and/or other local governing bodies*. . . ." (Emphasis added.)

The remainder of the statutory provisions that might bear upon non-Agreement State authority are extremely confusing, and to a certain extent, self-contradictory. Two of them, relied upon in the opinion of the Wyoming Attorney General as support for his opinion

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[51] 42 U.S.C.A. § 2202(e) (1979).

[52] 42 U.S.C.A. § 2114(b)(1) (1979).

[53] 42 U.S.C.A. § 2201(x) (1979) (emphasis added).

that non-Agreement States have concurrent jurisdiction with the NRC over non-radiological hazards of uranium mill tailings until November 3, 1981, may be discussed together at the outset – section 274k. of the Atomic Energy Act of 1954 and section 204(g) of the Mill Tailings Act. (It will be recalled that section 274 of the Atomic Energy Act authorizes and establishes the Agreement State program and that section 204 of the Mill Tailings Act amends section 274 to provide for Agreement State regulation of mill tailings).

Section 274k provides that:

> Nothing *in this section* shall be construed to affect the authority of any State or local agency to regulate activities for purposes other than protection against radiation hazards. (Emphasis added.)

Section 204(g) provides that:

> Nothing in any amendment made *by this section* shall preclude any State from exercising any other authority as permitted under the Atomic Energy Act of 1954 respecting any by-product material, as defined in section 11e.(2) of the Atomic Energy Act of 1954. (Emphasis added.)

These two provisions operate to preserve State authority *only* as against other provisions in sections 204 or 274, respectively, which apply to the Agreement State program – *not* to any other NRC authority over milling or mill tailings. Section 274k. of the Atomic Energy Act of 1954 and section 204(g) of the Mill Tailings

Act merely prevent anything *in section 274, as amended – i.e.*, the Agreement State program – from affecting State authority over non-radiological hazards.[54] Sections 84 and 275 of the Atomic Energy Act of 1954 (added by §§ 202(a) and 206a, respectively, of the Mill Tailings Act) give NRC and EPA clear immediate authority over nonradiological (as well as radiological) matters, and are not limited by any reservation of prior State authority in section 274k. of the Atomic Energy Act of 1954 or section 204(g) of the Mill Tailings Act.

Thus neither section 274k. nor section 204(g) operates to preserve non-Agreement State authority over the non-radiological hazards of uranium mill tailings.

Most confusing is section 204(h)(1) of the Mill Tailings Act, which purports to preserve prior State authority

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[54] The Opinion of the Wyoming Attorney General fails to point out that section 274k. of the Atomic Energy Act of 1954 and section 204(g) of the Mill Tailings Act apply only to the Agreement State provisions of section 274 and amendments thereto, making them of no value in reserving State authority against sections 84 and 275 of the Atomic Energy Act of 1954:

> [Congress'] failure to repeal Section 2021(k) of the AEA – the judicial touchstone for decisions recognizing state regulatory authority over non-radiological hazards – or to appeal [sic] or amend Section 204(g) of UMTRCA – which preserves to the states the authority over tailings permitted them under the AEA prior to amendments to the cooperative agreement section thereof – leaves non-agreement states in essentially the same position they were in with respect to tailings prior to 1978. (Opinion at 9.)

It also appears to erroneously assume that sections 84 and 275 do not take effect until 1981. (Opinion at 6.)

respecting section 11e.(2) byproduct material for the three-year period before the Act becomes fully effective. As originally enacted, section 204(h)(1) stated:

> On or before the date three years after the date of enactment of this Act, notwithstanding any amendment made by this title, any State may exercise any authority under State law respecting byproduct material, as defined in section 11e.(2) of the Atomic Energy Act of 1954, in the same manner, and to the same extent, as permitted before the enactment of this Act.

On its face, this provision would have preserved *any* State authority under State law regarding tailings for the three-year period before the Mill Tailings Act became fully effective in 1981. Read literally, this would include authority over radioactive and nonradioactive hazards of mill tailings. This was the understanding of the Commission, for when it suggested remedial amendments to eliminate concurrent NRC-Agreement State jurisdiction of uranium mill tailings (but not change the situation in non-Agreement States), its section-by-section analysis explained:

> In non-Agreement States, the NRC would have immediate authority to implement the regulatory program in Title II. Although section 204(h)(1) preserves prior State authority for three years, in case of conflict between

> Federal and State law, the Federal would prevail.[55]

Although the legislation as originally drafted by the Commission was introduced by Senator Domenici and passed by the Senate,[56] it was subsequently amended by Representative Udall to ensure that the new requirements of the Mill Tailings Act pertaining to Agreement State regulation and licensing of uranium milling and mill tailings would be applied to the maximum extent practicable during the three-year period before the Act becomes fully effective.[57] Section 204(h)(1) as amended reads in part as follows:

> During the three-year period beginning on the date of the enactment of this Act, notwithstanding any other provision of this title, *any State may exercise any authority under State law (including authority exercised pursuant to an agreement entered into pursuant to section 274 of the Atomic Energy Act of 1954)* respecting (A) byproduct material, as defined in section 11e.(2) of the Atomic Energy Act of 1954, or (B) any activity which results in the production of byproduct material as so defined, in the same manner and to the same extent as permitted before the date of enactment of this Act, *except that such State authority shall be exercised in a manner which, to the extent*

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[55] Cong. Rec. S15,006 (Oct. 24, 1979) (statement of Sen. Domenici incorporating NRC's section-by-section analysis).

[56] *Id.*

[57] Cong. Rec. H 9772 (Oct. 26, 1979) (statement of Rep. Udall).

> *practicable is consistent with the requirements of section 274o. of the Atomic Energy Act of 1954* (as added by section 204(e) of this Act). . . .[58]

Obviously the drafters of the Udall amendments to the remedial amendments were not thinking in terms of preserving non-Agreement State authority over mill tailings: they were intent upon making the Agreement States follow the new requirements of the Mill Tailings Act to the maximum extent practicable.[59]

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[58] Pub. L. No. 96-106, § 22(b), 93 Stat. 799 (1979) (emphasis added).

[59] In explaining his amendment, which also amended section 204(e) to provide that section 274o. "shall apply only to the maximum extent practicable during the three year period beginning on the date of enactment of this Act," Mr. Udall stated:

> "My amendment changes the Senate Amendment to provide that specified effective standards and procedures in the act would be effective immediately to the maximum extent practicable. Further the Nuclear Regulatory Commission is declared to retain authority to assure that *agreement States* in exercizing [sic] their licensing activities implement the requirements to the maximum extent practicable. (Empahsis [sic] added) Cong. Rec. H 9772 (October 26, 1979).

Upon return of the measure to the Senate, Senator Domenici accepted the Udall amendment and indicated his understanding that the new language was to apply to the Agreement States:

> Mr. President, I am willing to accept this modification to my amendment. However, because this is a new addition to the statutory language, some further explanation may be in order. First, as the legislative history to the Mill Tailings Act recognized, there may be several reasons why it is not practicable for a particular Agreement State to meet one or more of the new requirements

The result is a provision which does not admit of any reading which gives full effect to all of the language used. Three possible interpretations, each strained, appear possible.

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of the act within the 3-year interim period. For example, action by the State legislature may be required to give the State regulatory agencies authority to meet certain of the requirements, or action of the State legislature may be needed to provide all the necessary funding to meet the new requirements. Because some State legislatures meet infrequently, the time needed to accomplish any necessary changes may vary considerably. Also, after NRC issues any new substantive standards for the control of mill tailings, a period of time may be required for the Agreement States to incorporate the new standards into thier [sic] ongoing regulatory programs. These are just a few examples of factors which could make it not practicable for an Agreement State to meet one or more of the new requirements during the 3-year interim period.

With regard to NRC's role during the interim period, this amendment would not give the Commission any new authority over individual State licensing determinations. Thus, the Commission would not have the authority to issue, deny or revoke licenses in the Agreement States. Rather, NRC's role during the interim period will be to assist the Agreement States in upgrading their regulatory programs to meet the new requirements. One approach which has already been used effectively in this process is the offer of NRC technical assistance to the State on a consultant basis. Another useful tool is the grant program established by the Mill Tailings Act. The amendment provides an added directive to the Commission to work in cooperation with the Agreement States to improve the effectiveness of their regulatory efforts as soon as possible.

Cong. Rec. S. 14356 (October 29, 1979).

First, the provision could be construed as applying to Agreement States only. While this would give effect to the intention of the language added by the remedial amendments (see footnote 59, *supra*) it would require reading "any State" to mean "Agreement State," and would implicitly repeal the earlier preservation, insofar as non-Agreement States are concerned, of previously existing authority over the non-radiological hazards of tailings. The sparse legislative history contains no indication that the Commission in proposing the remedial amendments or the Congress in acting upon them intended this latter result. Moreover, as previously noted, Congress was generally careful to indicate clearly when references to Agreement States were intended.

Second, the provision could be read, in its entirety, as applying to all states. The introductory reference to "any State" would support such a reading, but the necessary consequence, if the remainder of the provision is read literally, would be that non-Agreement States would be bound to apply "to the extent practicable" other provisions which, when enacted, were intended to apply only to Agreement States. Moreover in non-Agreement States this obligation would endure only until November 8, 1981, where as in Agreement States the requirements would become ever more stringent after that date. The legislative history provides no support for such a result, and no sound legislative purpose for such a scheme is apparent.

The third alternative is to read the general preservation of authority in section 204(h)(1) as applying to any

state and limiting the applicability of the provision for compliance with the requirements of section 274o. "to the extent practicable" to Agreement States. In effect, this requires the insertion of a phrase into the language added by Representative Udall so that it reads along the following lines:

> except that such State authority, *when exercised by an Agreement State*, shall be exercised in a manner which. . . .

Such an approach to the interpretation of section 204(h)(1) would (a), maintain the original reservation of authority to all states, as originally intended,[60] (b) eliminate concurrent jurisdiction in Agreement States, as was clearly intended,[61] and impose interim requirements only upon the Agreement States, which is all that Congress appears to have actually contemplated.[62] The problem with this approach, obviously, is that it requires reading into the statute words which are not there.

The leading commentator on statutory construction observes that "words may be inserted in or added to a statute where that is necessary in order to effectuate the legislative intent or manifested statutory meaning"[63] but notes that the Federal Courts (in contrast to a great many State courts) deny themselves that

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[60] See n. 52, *supra*, and accompanying text.

[61] *Id.*

[62] See n. 55, supra, and accompanying text.

[63] 2 A Sutherland, STATUTORY CONSTRUCTION, § 47.38 (4th ed., C. D. Sands 1973).

power.[64] The Supreme Court has said "Our problem is to construe what Congress has written. After all, Congress expresses its purpose in words. It is for us to ascertain – neither to add nor to subtract, neither to delete nor to distort." *62 Cases of Jam v. United States*, 340 U.S. 593, 596 (1951). This pronouncement was made, however, in a case where the Court was asked to reach a result which would "distort the ordinary meaning of the statute." *Id.* at 600.

The Situation Before November 8, 1981 – Conclusion

Each of the three possible constructions of section 204(h)(1) present problems. None will give full effect to all the parts of the statute; only the third option will give full effect to the available indicia of legislative intent. Though the question is extremely close, we believe that the better legal view is to read the section as applying – as it says – to any state, thus expressly preserving to non-Agreement States until November 8, 1981, authority over the non-radiological hazards of uranium mill tailings. The attendant difficulty of implementing the unintended and illogical requirement that non-Agreement States implement the provisions of section 274o. "to the extent practicable" can be obviated by adopting the third option presented, or by exercising discretion in interpreting and enforcing the applicability of that proviso to the non-Agreement States. In light of the manifest legislative intent of the remedial amendments, it would not appear to be an

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[64] *Id.* at n. 4.

abuse of discretion for the Commission to decline to enforce the use of 274o. procedures by non-Agreement States during the short remaining life of section 204(h)(1) (*i.e.*, to find that it is not practicable for non-Agreement States to comply with these precedures [sic] until November 8, 1981).

b. The situation after November 8, 1981

As we have seen, there is no provision in either the Atomic Energy Act of 1954 as amended or the Mill Tailings Act as amended which indicates an express Congressional intent to preserve or prohibit non-Agreement state authority over the non-radiological hazards of uranium mill tailings after November 8, 1981, the date on which section 204(h)(1) ceases to have effect. Thus the question of concurrent jurisdiction versus implied preemption after that date turns upon whether Congress has "occupied the field." Like the other questions examined in this paper, it is a close one.

The Case for total preemption

The Mill Tailings Act creates a comprehensive Federal scheme that is designed to establish a uniform national program for regulating the radiological and non-radiological hazards of uranium mill tailings regulation. This intent is woven through the overall regulatory scheme as described in detail at pages 12-18, *supra*. For example, even in Agreement States, (which previously were given all the Commission's authority

over materials transferred pursuant to section 274b. of the Atomic Energy Act of 1954), the NRC is given a lead role in standard-setting and direct authority concerning long term tailings management. Further evidence of the pervasive nature of the Commission's authority over all of the hazards associated with uranium milling and mill tailings may be found in the legislative history of the Mill Tailings Act which makes numerous references to the general intent to establish a uniform Federal regulatory regime covering all aspects of uranium mill tailings management.[65]

Indeed, the statutory provisions describing the role of the NRC in the regulatory scheme for uranium mill tailings are far more detailed than those for nuclear reactors.[66] Using the tests set forth in *Northern States Power*, it is not difficult to argue that (1) in enacting the Mill Tailings Act, the Congress intended to establish a Federal scheme to regulate all hazards associated with uranium mill tailings.; (2) this scheme, when incorporated into the Atomic Energy Act of 1954, is

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[65] For example:

> This section amends section 274 of the Atomic Energy Act to provide for adherence by Agreement States to minimum *Federal standards* for uranium mill tailings control, stabilization, and disposal. H.R. Rep. No. 95-1480, Pt. 2, 95th Cong., 2d Sess. 44 (1978). (emphasis added.)

[66] *Compare* section 83 and 84 of the Atomic Energy Act of 1954, 42 U.S.C.A. § 2113, 2114 (1979) governing uranium mill tailings management *with* sections 102 and 103 of the Atomic Energy Act of 1954, 42 U.S.C.A. § 2132, 2133 (1976) governing the licensing of nuclear reactors.

sufficiently pervasive to oust State regulation; (3) the subject matter – the long term hazards associated with the nuclear fuel cycle – is one that demands exclusive Federal regulation in order to achieve uniformity vital to national interests; and (4) that State law (which if left to reign freely would inevitably induce local variations in the regulation of uranium mill tailings) does stand as an obstacle to the purposes and objectives of Congress.

Moreover, there is no completely convincing reason to distinguish between radiological and nonradiological hazards for reasons of preemption. The NRC's new responsibilities under the Mill Tailings Act regarding environmental and nonradioactive hazards of uranium milling operations and mill tailings are made an integral part of the Atomic Energy Act's comprehensive plan for Federal preeminence in nuclear regulation. Using the same logic as was employed in *Northern States Power*, one could conclude that the fact that the Congress expressly gave Agreement States authorities over environmental and nonradiological hazards associated with mill tailing[67] must mean that these

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[67] Section 274o.(3)(C) of the Atomic Energy Act of 1954, 42 U.S.C.A. § 2021(o)(3)(C) states that the Agreement States, when licensing uranium milling operations or mill tailings, shall:

> require for each license which has a significant impact on the human environment a written analysis . . . of the impact of such license, including any activities conducted pursuant thereto, on the environment, which analysis shall include –

authorities are no longer generally available under state police powers.[68] In short, this argument holds that allowing non-Agreement States to exercise concurrent jurisdiction over nonradiological hazards of uranium mill tailings would be tantamount to allowing the non-Agreement States the privileges in this regard allowed under the Agreement State program without requiring an agreement and all the conditions and safeguards that attach thereto.

Thus, this argument goes, it is clear under the Mill Tailings Act that there is a manifested congressional intent to preempt all residual State police power authority over uranium mill tailings – radiological and nonradiological. This intent is sufficient to overcome the presumption against preemption of historic State

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(i) an assessment of the radiological and *nonradiological impacts* to the public health of the activities to be conducted pursuant to such license;

(ii) an assessment of any *impact on any waterway and ground w*[illegible] resulting from such activities;

(iii) consideration of alternatives, including alternative sites and *engineering methods*, to the activities to be conducted pursuant to such license; and

(iv) consideration of the long-term impacts, including decommissioning, decontamination, and reclamation impacts, associated with activities to be conducted pursuant to such license, including the management of any byproduct material, as defined in section 11e.(2). . . . (emphasis added.)

[68] The additional buttressing argument can be made that by delineating certain responsibilities the states were to retain, Congress had focused upon the subject and decided that authority not mentioned was not to be retained.

police powers.[69] As was stated in the *United States v. City of New York* case, where such State law stands as an obstacle to the accomplishment of the full purposes and objectives of Congress, "the local legislation is not insulated by its wisdom or nobility; for the purposes of the Supremacy Clause, the merit of the local enactment is irrelevant."[70]

The case for concurrent jurisdiction

A convincing argument can also be made, however, that while there is Federal preemption of State authority over radiological hazards associated with uranium mill tailings, there is concurrent NRC-State authority over the nonradiological hazards (recognizing that, in the event of conflict, the NRC authority is paramount). This argument for NRC preemption of State regulatory authority concerning radiological matters, with concurrent State-NRC jurisdiction over nonradiological and environmental matters, assumes that radiological hazards of uranium milling and mill tailings should be treated differently than nonradiological hazards for purposes of preemption.

Traditionally, only radiological matters have been held preempted in the case law regarding nuclear preemption. The scheme of the Atomic Energy Act of 1954 indicates that Congressional intent regarding preservation of State authority over nonradiological

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[69] Ray v. Atlantic Richfield Co., 435 U.S. 151 (1978).

[70] 463 F.Supp. at 608, *citing* Franklin National Bank v. New York, 347 U.S. 373, 378-79 (1954).

matters, as evidenced by section 274k., although perhaps limited by the grant of Federal authority in this area by the Mill Tailings Act, remains vital in terms of permitting concurrent State-NRC jurisdiction over such nonradiological hazards.[71] Further, the legislative history of the Mill Tailings Act indicates that radiological hazards were of primary concern.[72] At one point, a committee report describing the Mill Tailings Act specifically segregated NRC's nonradiological duties, as follows:

> With respect to *nonradiological* matters, the NRC, through its environmental review under the NEPA mandate, would impose controls consistent with those imposed by EPA on similar materials contained in other solid wastes subject to EPA authority.[73]

In addition, it can be argued the Mill Tailings Act does not provide a truly comprehensive Federal scheme regarding nonradiological matters. More importantly, as discussed at pages 19-20 *supra*, certain authorities are available to any state under the Mill Tailings Act. The definition of section 11e.(2) byproduct material is somewhat vague (as indicated by NRC's need to clarify

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[71] 42 U.S.C. § 2021(k) (1976). As mentioned above, however, section 274k. preserves States' authority over nonradiological matters *only* as against other provisions regarding the Agreement State program – *not* as against NRC authorities over mill tailings.

[72] H.R. REP. NO. 95-1840, Pt. 1, 95th Cong., 2nd Sess., 11 (1978). *See* note 17, *supra*. Indeed, it is worth noting that the title of the Act is the Uranium Mill Tailings *Radiation* Control Act of 1978. (Emphasis added.)

[73] *Id.* at 16 (emphasis added).

it in the definition in 10 CFR 40.4(a-1)). Further, the definition excludes uranium mill tailings generated from a side stream of milling not done primarily to obtain source material. Thus, the state police power does cover some mill tailings identical to those described in section 11e(2) but for their origin.

Other authorities reserved to the states are their continued exercise of authority to administer certain provisions of the Clean Air Act and the Federal Water Pollution Control Act, and the authority under section 83(b)(1) of the Atomic Energy Act of 1954, as added by the Mill Tailings Act, to opt to take custody of tailings and their disposal site. It is equally clear that under section 161x. of the Atomic Energy Act of 1954, as added by the Mill Tailings Act, the NRC must, when imposing financial surety arrangements, consider other financial arrangements which are required by state and local governments.

Thus it seems that the various gaps in the otherwise pervasive Federal scheme covering the nonradiological hazards connected with uranium milling and mill tailings cause the argument for preemption in this area to fail. As discussed in depth earlier, historic state police powers, such as those at stake here, will not be found to be preempted absent a showing of clear congressional intent to this effect. It can readily be argued in the instant case, that the extent of federal authority over nonradiological hazards of uranium milling and mill tailings is insufficient to overcome the presumption against preemption, and that for this reason, the

NRC and the non-Agreement States would be able to exercise concurrent jurisdiction in this area.

The situation after November 8,1981 – Conclusion

The arguments for and against a conclusion that the Congress has so "occupied the field" as to preempt the possibility of any non-Agreement State regulation of the nonradiological hazards of uranium mill tailings are fairly evenly in balance. Both legal and practical considerations, however, lead us to the conclusion that the better view is that Congress has not preempted the field, and that the states may therefore exercise concurrent jurisdiction. First is the practical consideration that the authority given to the NRC (and the EPA) is extremely broad, and that any exercise of it will prevail over any conflicting state regulatory action. In other words, the federal regulatory agencies have the power to ensure that state regulation in this area cannot serve to frustrate the Congressional purpose. Second, while the Mill Tailings Act provides for federal regulatory authority over the nonradiological hazards of uranium mill tailings, the thrust of the legislative history and the NRC implementing regulations is directed toward radiological hazards. As a legal matter, this undercuts the argument that the field of regulation of nonradiological hazards has been so fully occupied as to leave no room for the states.

Applying the four tests enumerated in *Northern States Power*, *supra*, (and the other preemption cases), we find the more persuasive view to be that (1) the Mill

Tailings Act and its legislative history do not provide clear evidence of Congressional intent to oust non-Agreement States of all authority over the nonradiological hazards of uranium mill tailings, (2) the federal regulatory scheme, while broad, is not all-encompassing, (3) the subject of uranium mill tailings regulation does not demand "exclusive federal regulation in order to achieve uniformity vital to national interests," and (4) concurrent non-Agreement State regulation of the nonradiological hazards of uranium mill tailings need not "stand as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress."

Summary of Conclusions

We believe the better legal view to be that non-Agreement States have concurrent jurisdiction with the NRC to regulate the nonradiological hazards of uranium mill tailings both before and after November 8, 1981, so long as any such state regulation is not in conflict with that of NRC. This is based upon the absence, in our view, of sufficient indication of Congressional intent to so fully occupy the field as to overcome the strong presumption against implied repeal of state police powers. Before November 8, 1981, this conclusion is buttressed by the apparent Congressional intent in section 204(h)(1) of the Mill Tailings Act to preserve previously existing Agreement State authority over the nonradiological hazards of uranium mill tailings.

ASSESSMENT OF RISK FROM URANIUM MINING IN VIRGINIA

Prepared for

The Coal and Energy Commission
Commonwealth of Virginia

September 1984

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SUMMARY

This report presents an evaluation of the potential radiological risks associated with uranium development in Virginia. Included in the report is a discussion of how radiological risks can be evaluated, a discussion of the results of an evaluation of the proposed Swanson project prepared by the proponents, Marline and Union Carbide (now Umetco), and a discussion of various considerations relevant to setting radiation protection standards for uranium development in Virginia.

A uranium development facility typically includes a mine, a mill, and a tailings (waste) management area. Each of these components can affect the levels of radioactivity in the environment. The possible effects that

such releases of radioactivity might have on the public can be assessed by radiation pathways analysis. Such an analysis makes use of models to estimate the exposure that members of the public (in this case persons most likely to receive the highest exposures) could receive by all of the possible pathways of exposure. Examples of potential exposure pathways include drinking water, consuming fish from nearby waters, eating locally grown vegetables and inhaling air, all of which may contain radioactivity released from the facility.

The models used in radiation pathways analysis incorporate basic scientific principles, the experience gained at similar projects, characteristics of the specific site and project being studied, and information about the lifestyles of potentially exposed people. The various models needed to represent the different pathways are often combined into computer codes. Several generic codes are currently available which users can modify to study specific scenarios or facilities.

The pathways analysis prepared by the proponents for the Swanson project utilized two codes: MILDOS and PABLM. The MILDOS code was used to estimate exposures from airborne emissions while the PABLM code was used to evaluate exposures from radionuclides released to the surface waters and subsequently transported via aquatic and/or terrestrial pathways. Exposures were estimated for several locations. The estimates indicated that the air pathways would be the dominant route of exposure at most locations, releases from the mine would contribute a large portion of the total dose, exposure would decrease rapidly with

distance from the sources, and exposures would markedly drop upon project close-out.

Table S.1 presents exposure estimates of particular interest together with some comparative values that can be used to put the estimates into perspective. The estimates indicate that under normal operating conditions the most exposed hypothetical off-site receptor would receive an incremental (above background) exposure of about 7.8 mrem per year taking into account all sources and pathways modelled. (The rem is a unit used to express the amount of radiation exposure. A millirem or mrem is one one-thousandth of a rem.) The population dose to all persons living within 50 miles of the project site was also calculated. This calculation indicated that an average member of the population within this 50 mile radius would receive an incremental dose of about 0.04 mrem per year, which is nearly 200 times smaller than that predicted for the most exposed off-site individual.

One way to assess the exposures predicted for the Swanson project is to compare them with current regulations. The two federal agencies largely responsible for setting radiation protection standards are the Environmental Protection Agency (EPA) and the Nuclear Regulatory Commission (NRC). The EPA currently requires that exposures to the public not be more than 25 mrem per year excluding exposures due to background radiation, releases from mines, or any exposure to radon gas and its short-lived daughters. The NRC requires that exposure to any individual in an unrestricted area not exceed 500 mrem per year. This

regulation does include exposure from radon and its daughters but, like the EPA standard, does not apply to any releases from mines or background radiation. The Swanson exposure estimates noted above and shown in Table S.1 were based upon releases from a fully developed facility including the mine, mill, and tailings facility.

A second way to assess the predicted incremental exposures is to compare them to existing levels of background (naturally occurring) radiation. Based on measurements taken at ten outdoor locations around the site in 1983, background radiation levels amount to approximately 90 mrem per year of external whole body exposure and approximately 120 mrem per year of radon daughter exposure (calculated on an equivalent risk basis). Additional exposures would result from taking naturally occurring radionuclides into the body through eating and breathing.

A third way to assess incremental radiation exposures is to compare the risks resulting from such exposures to the levels of risk associated with other activities. All activities present some element of risk. For many activities, the levels of risk are so small that no thought is given to avoiding those activities. In this context, a risk of death in the order of about one-in-a-million is in the range of risks commonly considered to be insignificant (*de minimis*). For instance, travelling 50 miles by car incurs a risk of death of one-in-a-million. The maximum predicted dose of 7.8 mrem per year to a hypothetical off-site receptor is within this range of risks and the risk to an average receptor living within a 50

mile radius of the site is lower still. This approach to assessing radiation exposures is illustrated by the data provided in Table S.1 where the lifetime risk arising from one year of exposure at the levels shown are presented.

TABLE S.1

Summary Comparative Dose and Risk

Receptor/ Characteristics	Annual Whole Body Dose	Risk per Million Persons**
NRC limit for general population (excluding background exposure and any release from mines)	500 mrem	50
Exposure to local residents from natural background radiation in vicinity of project prior to mining activity (dose equivalent due to external radiation and inhaled radon daughters)	210 mrem	21
Coles Hill property (on mining site)	16.4 mrem	1.6
Hypothetical off-site receptor with the largest potential exposure* (the location is currently unoccupied)	7.8 mrem	0.78

Hypothetical receptor living at Cedar Hill Hunt Club*	3.5 mrem	0.35
Hypothetical receptor living in Halifax*	0.15 mrem	0.015
Dose to hypothetical average receptor of the population currently living within 50 miles of project*	0.04 mrem	0.004
Average risk of dying from cancer in the U.S.	not applicable	180,000

Note

* Exposure estimates for hypothetical receptor, the Cedar Hunt Club resident and typical Halifax resident include contributions of all radionuclides released from all sources. Federal regulations exclude some sources and radionuclides.

** lifetime risk = annual dose (mrem) $\times \frac{1}{1{,}000} \frac{\text{rem}}{\text{mrem}} \times \frac{1}{10{,}000} \frac{\text{lifetime risk}}{\text{rem}}$

Our review of the pathways analysis prepared by the proponents of the Swanson project suggests that their estimates are likely indicative of expected exposures. Refinement of the analysis can reasonably be left to later stages of project development. The analysis prepared by the proponents also indicates that the maximum predicted exposures are well below federal requirements and represent only a few percent of the

natural background levels in the Swanson area. The total annual dose equivalent for all of the people living within 50 miles of the project during the 13 years of operations translates into a lifetime risk of about 0.04 additional fatal cancers. This can be put in perspective by noting that the current incidence of cancer-related mortality in the U.S. (approximately 18%) indicates that over a lifetime more than 140,000 cancer fatalities can be expected to occur in the population living within a 50 mile radius of the site irrespective of whether or not the Swanson project were developed.

Based on this risk assessment the following suggestions should be considered in the establishment of radiation protection standards for uranium mining in Virginia:

- all sources and pathways should be considered in assessing potential exposures
- the prime standard should be a maximum annual whole body dose consistent with a level of risk considered to be acceptable in Virginia
- secondary criteria (such as concentrations in air and water) and procedures for determining compliance need to be developed by State authorities
- efforts should be made to ensure that all doses are kept as far below the maximum dose limit as reasonably achievable, social and economic factors taken into account (ALARA).

REPORT OF THE

Virginia Coal and Energy Commission

TO THE GOVERNOR AND THE GENERAL ASSEMBLY OF VIRGINIA

[SEAL]

Senate Document No. 15

COMMONWEALTH OF VIRGINIA
RICHMOND
1985

* * *

E. Uranium (Councill, Colgan, Funsten, Nolen, Rosi, Smith, Watkins, Wolfe)

The Uranium Subcommittee (U.S.) was combined with the Uranium Administrative Group (U.A.G.) during the 1984 deliberations. The UAG was begun in 1983 for the purpose of finishing the detailed studies of the risks, effects, costs and benefits of uranium development in the Commonwealth. The Commission also established an interagency task force to assist the Uranium Subcommittee and the UAG in completing their work.

On October 1, 1984, this interagency task force submitted a report to the US/UAG specifying state performance standards which would be necessary for uranium mining and milling. This report also proposed a state regulatory framework for the administration and enforcement of the standards and regulations.

The US/UAG reviewed the task force report and formulated recommendations for the prerequisites and state performance standards believed necessary for uranium operations in the Commonwealth. These recommendations and specific proposals are set out in the US/UAG report in Appendix B below. More detailed recommendations are carried in the task force report and have been forwarded to the Commission for its consideration.

The Commission charged the Uranium Subcommittee with the task of reviewing proposed uranium draft legislation in November, 1984. The Subcommittee met on four occasions to review the legislation, to address specific concerns raised by the statutory language, and to ensure that the recommendations of the Uranium Task Force and the US/UAG were accurately reflected in the draft. In coordination with this effort, representatives of those state agencies which would be instrumental in the state regulatory program were contacted in order to assure that the agencies were satisfied with provisions of the draft which laid out their responsibilities.

The Uranium Subcommittee focused its attention on several sections of the draft and some changes were endorsed. One of the major revisions to the draft was to insert language into the legislation which would require a uranium licensee to develop a closure and post-closure plan, provide financial assurances for closure and post-closure care, and pay into a Uranium Response Fund which would guarantee one million dollars up front before any uranium production takes

place. The Fund would be available for use by the Commonwealth, at any time, for responding to to [sic] releases or threatened releases of any contamination into the environment.

The Subcommittee submitted the draft with these revisions to the Commission on December 17, 1984, reporting that it adequately places into statutory form, the specific state performance standards and recommendations of the Task Force and US/UAG Reports. The Uranium Subcommittee also asked for a refinement of the cost estimates submitted by the state agencies for starting up a regulatory program. This assessment was made with short-term costs in mind and under the assumption that Virginia would reach agreement status by 1986. The total projected cost for the agencies up to July 1, 1986 is $1.6 million.

IV. RECOMMENDATIONS

After careful consideration, the Commission has accepted the reports of its subcommittees. Based on these reports, the Commission makes the following recommendation: the proposed uranium draft legislation be passed on, without specific endorsement,* for consideration by the 1985 Session of the General Assembly.

Respectfully submitted,

Daniel W. Bird, Jr., Chairman

A. Victor Thomas, Vice Chairman

James F. Almand

Walter C. Ayers

John C. Buchanan

L. Blaine Carter

Charles J. Colgan

J. Paul Councill, Jr.

Cynthia J. Dahlin

Jerry D. Duane

Herbert O. Funsten, Ph.D.

Virgil H. Goode, Jr.

Glenn B. McClanan

Everard Munsey

Frank W. Nolen

Lewis W. Parker, Jr.

Ford C. Quillen

Alson H. Smith, Jr.

John Watkins

Richard A. Wolfe, Ph.D.

Donald L. McGlothlin, Sr., Ex Officio Member

* Twelve members voted in favor of a motion to pass on the proposed legislation without specific endorsement to the General Assembly and eight voted against the motion.

APPENDIX B

TO: Coal and Energy Commission

FROM: Uranium Subcommittee/Uranium Administrative Group

I. INTRODUCTION

In 1981, the General Assembly approved House Joint Resolution No. 324, requesting the Virginia Coal and Energy Commission to evaluate the effects of uranium development on the Commonwealth and its citizens. During the time since then – nearly four years – a great deal of time and effort has gone into one of the most thorough legislative studies ever undertaken in Virginia. The full Coal and Energy Commission has been involved in this process, holding meetings and public hearings throughout that period. In addition, a Uranium Subcommittee was created by the Commission Chairman to study the matter in greater detail and depth. This Subcommittee has made site visits to mines and mills in Texas, New Mexico, and Colorado. It held an informational seminar at Washington and Lee University. In a variety of other ways, it has sought to familiarize itself with the relevant issues.

In 1983, the Commission asked the General Assembly to create a Uranium Administrative Group (U.A.G.), made up of the heads of seven state agencies and an equal number of citizens appointed by the Commission Chairman, the Governor, and local governing bodies. The role given the U.A.G. was to assist the Commission in conducting detailed studies of the risks,

effects, costs, and benefits of uranium development in the Commonwealth. The U.A.G. also made site visits, held meetings, and used other means to inform itself on the issues.

When it became evident that the study could not be completed prior to 1984, the Coal and Energy Commission asked the U.A.G. and the Uranium Subcommittee to complete it during 1984. In addition, the Commission established an interagency task force (primarily those that were already on the U.A.G.) to assist the Uranium Subcommittee and the U.A.G. in completing the study.

II. Recommendation

We the members of the Uranium Subcommittee and the U.A.G. submit this report and transmit the report of the task force, thus completing the work given us last year. On October 1, the task force reported its findings and recommendations to us. We commend the task force for its diligent work. We also commend the Institute for Environmental Negotiation for the invaluable assistance it gave the task force. We have read and studied the task force report and held public hearings on its recommendations. We ourselves have discussed and debated these recommendations.

Based on all these efforts, we now conclude that the moratorium on uranium development can be lifted if essential specific recommendations derived from the work of the task force are enacted into law. Should any of these basic prerequisites fail to be included in

legislation, we as a group can no longer support the above conclusion.

Our recommendations for the prerequisites we believe necessary and the specific task force proposals that we endorse are set out below. More detailed recommendations are carried in the task force report and are forwarded, without specific endorsement, to be considered and studied by the Commission.

1. We believe that it is essential that Virginia become an agreement state with the right to license a uranium development facility.

2. We recommend that the following standards be imposed for uranium facilities: a total radiation dose standard for the general public of 25 millirem per year above background for sources other than radon and a concentration standard of one picocurie per liter above background for radon at any time. Together, these would yield a total maximum exposure level of 285 millirem per year for the nearest exposed individual. We also recommend, however, that the General Assembly specify that the ALARA principle (as low as reasonably achievable) be applied during permit review at a specific site in order to achieve doses less than the maximum 285 millirem level.

3. We believe a specific statute appropriate for the regulation of uranium mining should be enacted.

4. We recommend that the state's current nondegradation standard with respect to water should be clearly affirmed and made applicable to uranium

development; we do not believe, however, that any socio-economic variances should be allowed for uranium operations.

5. We agree that no process water should be allowed to be discharged to surface waters from either the mill or the tailings facility.

6. We recommend that state regulations and performance standards that govern hazardous waste land disposal facilities be specifically applied by statute to uranium development facilities. On the basis of information and clarification received following the completion of the task force's deliberations, we do not necessarily recommend that a 5 picocurie per gram standard be employed to determine when sub-grade ore and waste rock should be treated as a hazardous waste. It is our understanding the EPA standards in this regard are forthcoming which the State would then adopt; if such standards are not forthcoming, the threshold level should be addressed by the State.

7. We agree that a schedule of financial guarantees and fines should be developed to assure strict compliance with license and permit conditions. It is very important that such a schedule be developed carefully, since the taxpayer will likely bear the ultimate liability for compliance failures that have not been properly addressed in the schedule.

We also agree that a strict liability policy for damages be adopted and that this policy be supervised by the courts.

8. We recommend that a regulatory program be enacted which assigns (i) the Department of Health lead responsibility for negotiating an agreement with NRC and for issuing mill and tailings licenses, (ii) the Department of Mines, Minerals and Energy lead responsibility for licensing mines and for on-site monitoring and enforcement, and (iii) responsibility to these and other agencies for matters within their established areas of authority. We also urge the continuation of the task force as a coordinating body while the regulatory program is being put in place.

9. We agree that the task force should work during 1985 on a detailed budget for the total regulatory program. In an effort to acquaint the General Assembly with the projected costs of a regulatory program, however, we have asked the regulatory agencies for individual cost estimates. This data is attached to this report as Appendix I.

III. A Note on the Value of Cost-Benefit and Risk Assessment Studies

A major portion of the work that underlies the recommendations of both the task force and the Uranium Subcommittee/U.A.G. concerns analyses of the costs, benefits, and risks likely to accompany uranium mining and milling operations.

We felt it was important, in evaluating whether uranium development should be allowed to determine whether the benefits associated with development would exceed the costs. The Tayloe Murphy Institute

(TMI) was retained to assist with this assessment. In its report, TMI emphasized "that a large degree of uncertainty exists as to the magnitude of some costs and benefits." We acknowledge this fact. What we sought is to have costs and benefits quantified where possible and, at the same time, to note those which do not lend themselves to quantification.

We also wished to assess as well as we could the risks that the population at large would face from a uranium development facility. We realize that differences of opinion exist within the scientific community over the relative risks an individual experiences from exposure to a given level of radiation. Based on the studies done thus far at the proposed development site in Pittsylvania, our consultants have told us that a total of .04 additional fatal cancers are likely for the population within fifty miles of the project during its thirteen years of operation. Some individuals have argued that the risk is actually ten to fourteen times greater than our consultant's estimate. If this is so, the risk increases to .4 or .56 additional cancer deaths. This can be compared with the 140,000 fatal cancers that can be expected during the lifetime of that same population whether or not uranium is mined.

IV. Draft Legislation

We are attaching as Appendix II to this report legislation drafted by the Division of Legislative Services to accomplish the recommendations included in this report. Because of the time constraints involved in this

study, we as a group have not had time to review or comment on this draft. Therefore, we pass it along simply as a staff document.

V. Summary

Our work and the task force's studies this year provide a reasonable basis for a legislative judgment on the costs, risks and benefits of uranium development in the Commonwealth. Further studies and more detailed analyses of specific uranium development proposals will be appropriate and essential ingredients of the licensing process. We wish to reiterate our conclusion that if the General Assembly lifts the moratorium on uranium development, it should simultaneously enact into law recommendations set out in this report to assure adequate state regulation of uranium mining and milling.

Respectfully submitted,

J. Paul Councill, Jr., Chairman

* Watkins M. Abbitt, Jr.

Richard Burton

Keith Buttleman

Mason Carbaugh

* P. Scott Eubanks

* Herbert O. Funsten, Ph.D.

Dr. J. B. Kenley

Gerald P. McCarthy

* W. R. Meyer
* Frank W. Nolen

Fred D. Rosi, Ph.D.

* Alson H. Smith, Jr.
* Claude Swanson

Fred W. Walker

* Richard A. Wolfe, Ph.D.

* These individuals concur in the general recommendations of the report, but have filed additional statements which follow.

Dissents

The following individuals dissent from this report, as indicated in their attached statements.

Elizabeth H. Haskell

Frank E. Wallwork

Statement of Watkins M. Abbitt, Jr.

I concur in general with this report and its recommendations, but I believe that 1 picocurie per liter (see recommendation #2) is too high a maximum for radon.

Statement of Alson H. Smith, Jr.

I generally support this report. However, I still have questions with respect to the need for standards as severe as those pertaining to no-discharge and nondegradation. While I feel that protection of our water resources is necessary, I am not sure that these measures are the best approach. Therefore, I will continue to consider what is the best approach to protection of our water resources as these recommendations are considered by the Coal and Energy Commission and the General Assembly.

Moreover, insofar as the uranium industry is comparable to other industries in the State, it should be treated so.

Statement of Richard A. Wolfe.

I concur in general with the recommendation that the uranium industry can be allowed in Virginia if certain standards are instituted. However, some of the recommended standards are far too stringent. The uranium industry should be regulated like any other industry insofar as it is like any other industry. If it can meet safe drinking water standards to ensure that the environment is protected without the severe

requirements of non-degradation and no-discharge, less severe requirements should be imposed.

Statement of Claude Swanson

I agree that the moratorium can be lifted if specific laws and regulations are adopted. However, I would like to offer the following comments on the foregoing report.

Recommendation 4 – The state currently has an *anti-degradation policy.* Why do we keep changing the words? The idea is that we are going to treat the uranium industry the same as any other industry. If there is a hazard, let's correct it regardless of the business.

Recommendation 5 – Another old point is that this operation should be allowed to discharge process water if it meets state standards. This state already has lots of industries dealing with artificial chemicals that are allowed to discharge that are much more dangerous than nature's materials. If the state water standards needs tightening, then that is a problem to be examined another day.

Recommendation 7 – I feel that the Task Force has had a useful life and has done its job. I do not believe we need to make it a permanent organization. The US/UAG never agreed to continue he life of the Task Force. So I was surprised to see it included as a recommendation.

I would like [sic] also like to observe that the most important conclusion of the TMI was that the benefits outweighed the costs 26 to 1. That statement should be included since that was the most important result of that study.

Finally, I think the radiation risks used by SENES were average or generally accepted risks. Of course some people think the risks are overstated. We should not undermine the study by only pointing to the opponents – otherwise no one will even consider having x-rays.

To conclude, if the US/UAG really wanted to find industries that are hazards to the population of the Commonwealth, we should be looking elsewhere. I should add another simple thought that the uranium industry's hazards are radioactive and can be easily found unlike other modern business waste materials that we have learned to live with and manage.

Statement of Frank W. Nolen

I concur generally with the direction that the foregoing report would take the State. I believe that the uranium moratorium can be lifted, and I also agree that specific statutes and regulations need to be adopted to regulate this industry. Nevertheless, I do wish to make the following points to clarify my position with respect to the recommendations:

1. There are some recommendations which can be altered in such a way that the Subcommittee and

UAG would not have to withdraw its support from its general recommendation (e.g., a redesignation of a lead agency).

2. I believe it is desirable, rather than essential, that Virginia become an agreement state.

3. The radon concentration standard should be an average of one picocurie per liter.

4. Except for matters pertaining to radionuclides, uranium operations should be treated the same as any other industry. In line with this philosophy, the uranium industry should be expected to comply with current anti-degradation water standards. Likewise, liability requirements and policies for this industry should be based on similar policies for other industries.

5. The discharge of process water from the mill and tailings water should be allowed if the water meets existing state and federal standards.

6. I would like to note that the Tayloe Murphy Institute projected a cost benefit ratio for the proposed Swanson project of 26 to I.

7. The General Assembly should appropriate sufficient funds to ensure compliance with laws and regulations applicable to a uranium industry.

[SEAL]

COMMONWEALTH of VIRGINIA

Division of Industrial Development
Washington Building/Richmond, Virginia 23219
(804) 786-3791

MEMORANDUM

TO: Bernard Caton, Ph.D.

FROM: Scott Eubanks /s/ SE

DATE: November 8, 1984

SUBJECT: Draft Report of UAG

We believe your draft report accurately reflects the general positions taken by the U.S./UAG. It was a difficult task, no doubt, to produce this draft, and you and your associates are to be congratulated.

We have concerns about recommendation 4. First, the concept of non-degradation, in its most strict sense, seems unrealistic in any environment that is subject to activities by human beings. What is the meaning of non-degradation? No matter how well ameliorated, much of what we do in the normal course of living could be described as degrading to the environment. Second, the treatment of industry by state and local governments in their regulatory role needs to demonstrate the greatest degree of equity possible. If socioeconomic variances are allowed for some industries with regard to water regulations, then all industries should be allowed such variances.

PSE/dsh

[SEAL]

THE COLLEGE OF WILLIAM AND MARY
Williamsburg, Virginia 23185
Chartered in 1693

Department of Physics
(804) 253-4471

November 5, 1984

Dr. Bernard Caton
Coal and Energy Commission
P.O. Box 3AG
Richmond, VA 23208

Dear Bernie,

I agree in general with the US/UAG draft report, but am still concerned about the 1 pCi/ℓ radon standard for additional exposure for the general public due to uranium facility operations. This standard represents an appreciable fraction, ≃100%, of average ambient background. It also may account for a fair fraction, ≃20%, of all nonsmoker lung cancer incidence, using NCRP #78 May 1984, risk estimates (§ 11.2.2 and Senes report, p. 3-4).

Although there are indications, (Radford report on Scandanavian [sic] miners in the July '84 New England Journal of Medicine and EPA estimates), that the above risk may be somewhat worse by a factor of x3 to x10, I got the impression in talking with Dr. Naomi Harley who chaired the NCRP report, that the NCRP estimates were based upon the most extensive work currently available. She also mentioned that a large

scale concentration of 1 pCi/ℓ to the public would be vanishingly rare.

In view of this I would like to suggest setting ~1/3 pCi/ℓ or thereabout as a standard with the proviso that if widespread radon and radon daughter ambient levels, allowing for cyclic variation and averaged over a suitable time interval begin to rise over a certain amount, say 0.1 pCi/ℓ due to uranium facility operation, then appropriate agencies be notified. This emphasizes careful radon monitoring, a critical and key aspect of state regulation.

On a different matter, the total cost estimate, excluding consolidated lab work, of $850K for first year state regulation is similar to agreement state cost estimates of $300-500K made ≈10 years ago, adjusted to inflation.

Sincerely,

/s/ Herbert
Herbert O. Funsten

HOF/dbf

[SEAL]

COMMONWEALTH of VIRGINIA

State Air Pollution Control Board

ROOM 801, NINTH STREET OFFICE BUILDING
RICHMOND, VIRGINIA 23219
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YORKTOWN

WALLACE E. REED
CHARLOTTESVILLE

W.R. MEYER
EXECUTIVE DIRECTOR

November 2, 1984

Bernard Caton, Ph.D.
Research Associate
Division of Legislative Services
P. O. Box 3-AG
Richmond, VA 23208

Dear Bernie:

The report reflects the position of the majority of the US/UAG members but exception is taken to the proposed radiation exposure standard as expressed in Item 2, Section II Recommendation. The general public should not be exposed to any higher radiation dose

than necessary because a totally risk-free threshold cannot be identified. The International Commission on Radiological Protection (ICRP) has provided guidance to many countries that reflects this philosophy. ICRP recommends the establishment of dose limitations based upon the following three principles:

"1. No practice shall be adopted unless its introduction produces a positive net benefit;

2. All exposures shall be kept as low as reasonably achievable, economic and social factors being taken into account; and

3. The dose equivalent to individuals shall not exceed the limits recommended for the appropriate circumstances by the Commission."

The cost benefit study proposed by the Tayloe Murphy Institute provides information on the first principle. The second principle is commonly referred to as ALARA, an acronym for as low as reasonably achievable. The common interpretation of ALARA is that there is an appropriate degree of dose reduction, below the recommended individual dose limits, which should be determined by some form of cost benefit analyses. The ALARA principle has become a major objective of the practical application of radiological protection programs in many countries including the United States. Because of the many variables in applying this principle, it is most suited to be used on a case-by-case basis in a permit process. The third principle, which cites a dose exposure limit, is necessary in

applying the ALARA principle and is suitable for establishment by statute.

As stated in the US/UAG report, a uranium mill/mine can be built in Pittsylvania County with only a total of 0.04 additional fatal cancers likely for the population within fifty miles of the project during its thirteen years of operation. However, this is based on a total annual dose of 7.8 millirem per year from the proposed facility. Any increased exposure could well result in increased cancer. The proposed standard of 285 millirem per year would allow increased exposure. If the ALARA principle is established as part of the proposed radiation standard, this will not happen. In addition, the studies have shown that more stringent standards can be set. It seems persuasive to establish a performance standard which would be applied at the site boundary and this would limit exposure to the general public. Throughout the industry this limiting value is taken as one third of 500, or 170 millirem per year from particulate emission, excluding radon. It is recommended that a standard be established using the ALARA principle and in no case will the allowable radiation exposure exceed a total of 170 millirem per year. This equates to approximately 25 millirem per year from all sources except radon and 0.5 picocurie per litre from radon.

It is my understanding that the US/UAG at its October 24, 1984, meeting endorsed the Task Force Report with certain comments. This should be reflected in the report. On page 7 it is suggested that on line 5

the words "and the Task Force Report" be inserted after the words "this report."

Sincerely,

/s/ [Illegible]
W. R. Meyer
Executive Director

WRM/bh

cc: E. H. Haskell
R. W. Burton
R. C. Collins
R. S. Stroube
W. W. Parks
K. C. Van Auken

Elizabeth H. Haskell
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Martinsville, Virginia 24112

(703) 632-3865

COMMENTS ON THE US/UAG REPORT

A Different Perspective

I do not agree with the recommendation of the Uranium Subcommittee/Uranium Administrative Group (US/UAG) that the moratorium on uranium development can be lifted.

The case for uranium mining and milling in Virginia has not been made, in my opinion, despite extensive

studies by the US/UAG, consultants and the industry. The burden of proof is on those who wish mining to proceed and this burden has not been met for me. The risks of cancer deaths and illnesses from radiation released from the uranium ore and waste products called tailings are high in the state's proposal. The great many unknowns about the development and its impacts could push health risks much higher and raise costs to the Commonwealth, substantially reducing projected economic benefits.

If Virginia allows uranium mining and milling, it would be the first state to do so in a climate where rainfall exceeds evaporation and where many people would be exposed potentially to the resulting radiation in the water and air. Previous domestic uranium mining has been in arid, sparcely [sic] populated Western regions where transmission of radiation in water is not a concern. In Virginia's wet climate where water is discharged from the site and filters through tailings, the transmittal of radiation to people through streams and the groundwater is a major issue.

The experimental nature of the uranium industry in Virginia's wet climate and the environmental problems from radioactive tailings disposal in the West have caused the General Assembly to be justifiably cautious in approving the industry. Legislation has called for the assessment of risks and benefits. The US/UAG has had no actual experience to evaluate. French uranium is cited by the industry as similar, but no impacts data were produced on this situation. Rather, the UTF and US/UAG reports and conclusions

about costs, benefits and risks of a uranium industry are based on consultants predictions using mathematical models and other techniques to speculate about future effects of one mine and one mill. This site is known as the Swanson site in Pittsylvania County. No estimates were made of impacts of a statewide industry.

In my judgment, the consultants risk assessment study and cost/benefit analysis on which the UTF and US/UAG reports are based underestimate the health risks and overstate the benefits of the Swanson uranium mining and milling for the following reasons:

1.) The Swanson risk and cost/benefit calculations assume no negative impacts on ground water or surface waters. It is assumed that there will be no leaching of radioactive wastes or heavy metals to groundwaters that are used by neighbors, no substantial polluted discharges to streams, no accidents, no long-term deterioration or collapse of the 100 foot high tailings pile by flood, earthquake, erosion or design failure for the thousands of years the tailings are radioactive.

These are unrealistic assumptions in the net precipitation climate of Pittsylvania County, where groundwater reaches close to the surface and where above-ground tailings disposal will be required exposing the waste to weather and collapse. Mill Creek will be diverted around the site but no negative impacts are projected. An open-pit mine will be dug to 850 feet through the Chatham Fault and tailings disposed near

the Bannister River, using an undemonstrated containment technology.

A VPI/SU professor consulting with the UTF concluded that virtually all contaminants that would be disposed in the proposed tailings pile will eventually leach to groundwater. When and how fast pollutants will filter out will depend on the thickness and material of the liner under the tailings pile.

If the study's assumptions are wrong and polluted groundwaters flow through the rock fractures to affect groundwater supplies or surface water pollution increases, then the risks and economic costs to individuals and the state would rise.

2.) The US/UAG report estimates that up to .56 additional cancer deaths will result from the one mine/one mill Swanson development in the 13 years of operation. This assumes that the maximum exposed individual will receive 7.8 millirems of radiation, based on the industry and state consultant estimates. However, the UTF and the US/UAG have proposed state standards that would allow 285 millirems of radiation to the maximum exposed person, which is estimated to produce up to 21 cancer deaths during the 13 years. It is reasonable to expect that if the law permits 285 millirems that the industry could emit up to that level.

If more than one mine and one mill is developed in Pittsylvania County or other parts of the state, additional people will be exposed and risks increase. To estimate the maximum cancer risk from a uranium industry, rather than just one mine and mill, calculations

should be based on the proposed statutory total radiation standard of 285 millirems. This amount of radiation could produce anywhere from 28.5 to 399 additional cancer deaths in an average population of one million exposed persons. Various scientific organizations have differing views about just how many cancer deaths to expect. The state's consultant used the lower extreme of 28.5, while other governmental scientific organizations predict up to 399 cancer deaths.

3.) Health risks, other than neighbors' cancer deaths, were not estimated for the Swanson development. Traditional risk assessment methods are limited to predicting fatal cancers in the general public. The following risks are reasonable to expect:

* Worker accidents, illnesses and deaths were not included in the risk assessment but were left to future analyses. In addition to the employee risks associated with any surface mining, they will be exposed to radioactive materials in the mine, mill and tailings areas.

* Illnesses in the general population, including cancer, that do not result in death, were not included.

* Impacts on sensitive persons, notably children and pregnant women, would be more substantial than the impacts on the average population projected.

* Health risks were based on normal, expected operating conditions and do not, because they cannot, predict effects of a catastrophic event such as a flood, major accident or design failure that could collapse the tailings pile.

4.) Benefits calculations assume that the Swanson mine and mill will operate at full production for the 13 years of expected operation, producing 468 full-time jobs, while the history of the industry is one of cyclical unemployment. Benefits to employees would decrease and costs to the Commonwealth increase if periodic unemployment occurs.

5.) No calculations were made by the consultants, UTF, or the US/UAG of the long-term health and environmental effects and costs to the Commonwealth, those that occur for many years after closure of the mine and mill. Risks, costs, and benefits are projected for only the 13 years of operation, although risks and costs will continue for many years after the 13 years of benefits cease.

The US/UAG estimates that first year costs to the Commonwealth to regulate the Swanson site to be $850,510. Recurring costs during mining operations are projected to be $664,410 a year. No post-closure costs are projected, although the General Assembly should expect some to occur. After closure, the Commonwealth or the Federal Government will assume permanent ownership of the tailings pile, along with the costs of monitoring and managing the site, and responsibility for damages and cleanup should an environmental problem occur. In the event the tailings management technology fails or a flood or earthquake occurs, a very expensive tailings remedy could be required.

These calculations of long-term costs and predictions of catastrophic events were not made by state officials because of the very high degree of uncertainty

about such impacts of uranium mining and milling in Virginia. A great deal of hard work and investigation by legislators, state officials, private citizens and the industry has been devoted to improving our understanding of impacts of a Virginia uranium industry. The Swanson site-specific research was a valuable case study, which enabled the UTF to draft better uranium standards. However, while knowledge of a Virginia uranium industry has improved greatly over the past two years, uranium mining and milling in our climate and population density would be an experiment. Predicting impacts of such development are informed guesses, at best.

In my judgment, the unknowns and the identified risks to the public and the environment exceed the projected benefits and call for retaining the moratorium on mining and milling. This is a conservative approach that asks for a higher level of confidence before approving this unique industry.

However, if the General Assembly weighs the risks, costs and benefits differently, is willing to accept the uncertainties, and lifts the moratorium on uranium mining and milling, I endorse the US/UAG and UTF recommendations for legislation.

The total radiation dose standard should be made more protective for the public than the 285 millirems a year proposed in Recommendation 2 of the report. This proposal would expose an individual to the equivalent of 10 chest X-rays a year. This is added to the naturally occurring radon at the Swanson site of 130 millirems or about 5 chest X-rays, for a total of 15 X-rays

each year of operation. In my view, this is too high a level of risk for Virginia to accept. Regulators hope to set lower exposure limits in the uranium permitting process, but lower levels should be specifically written into any uranium mining law. A better alternative standard is a total radiation dose standard of 25 millirems per year above background for sources other than radon and a concentration standard of 0.5 picocurie per liter for radon, for a total of approximately 170 millirems a year.

In addition the concept of setting radiation exposure limits in a uranium permit that are more stringent than the statutory limit (known as As Low As Reasonably Achievable or ALARA) should be specifically authorized in any uranium mining law, so that radiation limits below 170 millirems are possible.

A trust fund should be established in any authorizing statute to cover long-term state costs of monitoring and managing a closed tailings site, including funds to pay for remedial action if a major environmental problem occurs. The mining companies and not the taxpayers of Virginia should bear this burden.

/s/ Elizabeth H. Haskell
Elizabeth H. Haskell
Member, Uranium
Administrative Group

Bernard Caton, Ph.D.
Research Associate
Division of Legislative Services
P.O. Box 3 AG
Richmond, Va. 23208

505 Buena Vista Drive
Halifax, Va. 24558
November 3, 1984

Dear Dr. Caton:

I do not concur with the conclusion of the Uranium Task Force. I also do not agree to the text of recommendations two (2) and revised six (6) and suggest the inclusion of an additional provision.

It is my considered opinion the conclusion should have been "the moratorium shall be continued until such time as proven technology has been demonstrated which will comply with the recommendations derived from the work of the task force."

The reasons for rejecting the conclusion of the Uranium Task Force are briefly summarized as follows:

1. The technology to prevent seepage of radionuclides, heavy metals, or chemicals from the tailings area into the ground water has not been developed.

2. Risk assessment:

    a. The whole study is not totally reliable because it is premised on a level of limited radiation emission which I cannot conceive as being achievable during an actual uranium operation.

    b. The conclusions relate only to cancer mortality; no consideration given to incidence,

nor any reference to any effects on pregnant women.

c. Risk to workers at the facility is not evaluated.

d. No assessment of a "worst case" scenario which should be of primary concern.

e. No evaluation of risk after closure or during a tempoary [sic] shut-down.

3. Cost/Benefit Analysis:

a. This study is premised on the pr)onent's projection of a full 350 day operation of the facility for 13 years. I cannot accept that premise and believe it is a fallacy to accept conclusions based on that premise.

b. All of the costs are inherent to the program whether the facility operates at 100% capacity or 50% of capacity; the benefits are not. This adversely affects any benefits to cost ratio.

c. Many of the costs are not quantified particulary [sic] as they apply to the environment and effects on local agriculture and dairy operations.

d. Income to the state is overestimated. Corporate income tax will be minimal as Marline has prior significant losses which can be carried forward for ten (10) years to offset any potential profit. Because of the projected wage scale income from individual state income tax payments is overestimated.

e. Cost to the state to implement the necessary programs and subequent [sic] monitoring of those programs far exceeds the potential income.

The following comments are adressed [sic] to the recommendations:

Recommendation number 2: This provision allows for an exposure of 285 millirem per year and in my opinion generates too high a risk factor. The concentration of one (1) picocurie per litre above background for radon is too high, and should be reduced to at least one half (1/2) picocurie per litre and possibly less. Marline projects they can meet a tighter standard and it should be established.

Recommendation number 6 revised: The standard of five (5) picocuries per gram to determine when sub-grade ore and waste rock is to be treated as hazardous waste should be maintained. Sub-grade ore particularly creates an hazard and an additional risk factor.

As an additional provision, I suggest the tailings to be deposited at the Swanson site be restricted to the waste generated from the Swanson mine.

I realize this suggestion was not considered to be a legislative decision, but bear in mind, if not implemented, the risk assessment considered only a two hundred (200) acre site.

I recognize that I am in the minority on the decision of the Uranium Administrative Group, but as you indicated in your letter of October 30, these comments will be attached to the final report.

Thank you for the opportunity to express my concern and disagreements. I also express my appreciation to you and the rest of the staff in keeping all members of the U. A. G. so well informed, and for the many courtesies extended to me personally.

/s/ Frank E. Wallwork
Frank E. Wallwork
Member of the U. A. G.

A Preliminary Assessment of Potential Impacts of Uranium Mining in Virginia on Drinking Water Sources

FINAL REPORT

REVISED February 22, 2011

[SEAL]

Executive Summary

A large uranium reserve, estimated to be over 100 million pounds, was discovered at the Coles Hill site in Pittsylvania County, Virginia about three decades ago (see Figure ES-1). This reserve could be large enough to supply the fuel to all nuclear reactors in the United States for two years. There is interest in the mining and milling of these reserves, which are located upstream of John H. Kerr Reservoir (Kerr Reservoir) and Lake Gaston in southern Virginia. This report describes, and provides the results of, a preliminary assessment that investigated the potential impacts of a uranium tailings release on downstream water sources. Specifically, the assessment focused on the potential of a catastrophic failure of a uranium-tailings containment structure and subsequent discharge of uranium tailings into the Banister or Roanoke Rivers and the resulting radioactive contamination in downstream water bodies including the Kerr Reservoir. The preliminary assessment aimed to address the following objectives:

- Estimate the amount of uranium-contaminated sediment and water that might reach Kerr

Reservoir under normal and extreme precipitation events; and

- Estimate the potential increase in radioactivity levels and other contaminants in Kerr Reservoir.

Background

Mined uranium ore is normally processed by first grinding it to a small, uniform particle size (this is called the milling process) and then treating it with chemical solutions to extract the uranium. Because uranium ore is mostly present at relatively low concentrations in the United States (0.05 to 0.3 percent), uranium milling and extraction produces vast quantities of waste material known as tailings, which are typically stored in impoundments formed behind containment structures such as dams.

These tailings retain about 85 percent of the original radioactivity for hundreds of thousands of years because of other radioactive materials, such as radium and thorium, which are not extracted during the uranium milling process. These radioactive materials can adversely affect public health if they are not confined properly or are released to the environment. In addition, uranium tailings still contain uranium and other potentially hazardous substances such as arsenic, which are toxic and can affect public health if they leach into groundwater or surface water.

Historically, a number of tailings containment structures have failed in the United States and elsewhere,

resulting in the release of radioactive (such as uranium tailings) and non-radioactive (such as coal ash, copper, iron, phosphate tailings) materials to downstream surface waters. Although there were a variety of reasons for these failures, such as seepage, structural defects, earthquakes, and foundation settlement, extreme precipitation events caused most of the failures world-wide, which, in many cases, led to loss of life and caused severe contamination downstream.

Climatic and geologic conditions surrounding uranium ore deposits in Pittsylvania County make the area prone to extreme rainfall events including tropical storms and hurricanes, some of which have generated substantial flooding. Although presently uranium tailings are required to be stored in specially designed waste disposal facilities called containment cells or structures in compliance with Nuclear Regulatory Commission regulations, there is concern that a failure of the uranium tailings containment structures could result in the contamination of the downstream drinking water supply sources along the Banister River, Roanoke River, Kerr Reservoir and Lake Gaston.

Preliminary Assessment Approach

In an effort to address this concern, a preliminary assessment was conducted to investigate potential impacts of uranium tailings discharged into Banister and Roanoke Rivers in case of catastrophic failure of a containment structure.

The preliminary assessment was based on a one-dimensional (1-D) numerical modeling/simulation of the Banister and Roanoke Rivers and the Kerr Reservoir using the CCHE1D model developed by the University of Mississippi for the United States Department of Agriculture. CCHE1D is a software package that can simulate one-dimensional unsteady flows, sediment transport and streambed morphodynamics, and transport and fate of contaminants.

The framework employed for the preliminary assessment included simulation of the variation in radioactivity concentrations along Roanoke and Banister rivers and the Kerr Reservoir in case of catastrophic failure of a containment structure under sunny day and extreme flooding conditions throughout a period of one year each. Because the exact location of the potential mine, milling facility and the containment structures were not known at the time of this assessment, it was assumed that the containment structures could be located anywhere in the vicinity of Coles Hill and/or somewhere in the proximity of the area where former uranium leases were issued (as shown in Figure ES-1), within either the Banister River or Roanoke River watersheds.

Due to lack of site specific data associated with uranium milling, extraction, tailings properties and containment structure (location, volume, etc.), data from literature were used for various parameters needed for the simulations – such as the sediment concentration in tailings, particle size distribution, and radioactivity concentrations for radium-226 and thorium-230.

A range of values reported in the literature were used along with variables such as the volume of tailings and flood hydrographs to establish a range of possible scenarios that could potentially be implemented for this project:

- Volume of tailings – 0.8, 2.5, 5.0 and 8 million cubic meters (to account for storage volumes that can be achieved with a dam height of 5 m, 15 m, 30 m, and 50 m, respectively, and a surface area of 40 acres)
- Sediment concentration by weight of tailings – 15- (CSW1), 32.5- (CSW2), 50- (CSW3), and 70-percent (CSW4) as reported in literature
- Flood hydrographs – 10-percent (HYD1), 1-percent (HYD2), and 0.2-percent-annual-chance (HYD3) events (maximum discharges recorded by USGS gages in Banister and Roanoke Rivers ranged between 58 and 94-percent of the 0.2-percent-annual-chance hydrographs) and an average water year hydrograph for the rivers
- Particle size distribution of tailings – two different particle size distributions reported in literature were used – one represents a wider grain size range and has a higher percentage of coarser sediments (GSC1) and the other has a narrower range of size classes and a higher percentage of finer sediments (GSC2).
- Radioactivity level and uranium content in tailings – minimum (RAD1) and maximum level (RAD2) radioactivity content due to radium-226 and thorium-230, and uranium

content as reported in literature for the acid leaching process[1] (for three components of the tailings – sands, slimes and liquids)

The simulations were carried out to observe the movement of tailings and the variation of radionuclide concentrations in Banister and Roanoke Rivers and Kerr Reservoir for a period of one to two years depending on the scenario. Tailings containment failure under sunny day (assumed dam failure without the effect of extreme floods) and extreme flooding (assumed dam failure as a result of an extreme rainfall event) conditions were simulated. For tailings containment failure scenarios under extreme flooding, percent annual chance hydrographs (which cause the dam failure) were appended by the average water year hydrograph.

Assessment Results

The preliminary assessment shows that radiological contaminants (radium-226 and thorium-230) in the water column and sediments in Banister and Roanoke Rivers and the Kerr Reservoir could result in water column concentrations exceeding the regulatory maximum contaminant level[2] (MCL) for combined radium-226 and 228 in drinking water for an extended period of time. However, the radioactivity concentrations in

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[1] Radioactivity characteristics of uranium tailings exposed to alkaline leaching are less defined than acid leaching. Data reported for liquid and slime components of tailings fall within the limits used for this assessment for acid leaching.

[2] There is no MCL for thorium; however, MCL for alpha/photon emitters is 15 pCi/L.

the water column subsided after a certain period of time and fell below the MCL for combined radium by the end of simulations (which were run for approximately 364 days) as shown in Figure ES-2 and Table ES-1.

It was also observed from the simulations that while the radioactivity concentrations in the water column diminish over time as river flow flushes the radionuclides from the system to Lake Gaston and further downstream, a significant amount of the radionuclides remain in the river/reservoir system adsorbed to the sand and slime components of the tailings that settle at the river bottom and in the reservoir. Table ES-2 shows how much of the initial radionuclides that entered each river as a result of tailings containment failure remain in the system after a one year of simulation for the same scenario provided in Table ES-1. As can be seen in Table ES-2, approximately 78 percent or more of the initial radioactivity released into the river/reservoir system still remains in the system and mostly in the sediments at the bottom of the river and in the reservoir after one year.

The radioactivity remaining in the sediments of bed layers will be prone to re-suspension multiple times over the years as large flows and extreme flood events are experienced by the rivers. To validate this phenomenon, a series of simulations were carried out in which a 1-percent annual chance hydrograph was imposed at the end of a sunny day failure scenario to evaluate the effect of an extreme flood on re-suspension of contaminated sediments. The results showed

that the re-suspension of contaminated sediments from the river bed can cause radioactivity concentration levels to rise as shown in Figure ES-3. For example, simulations for Roanoke River revealed that radioactivity concentrations could increase by up to an order of magnitude that would be three times higher than the regulatory limit of 5 pCi/L.

In addition to the radioactivity impacts of uranium tailings (due to radium and thorium) on the rivers and Kerr Reservoir, the transport and fate of uranium was also simulated since uranium is a toxic substance that can impact human health. The results show that uranium concentrations in the water may temporarily reach or exceed the regulatory limit of 30 µg/L throughout the river/reservoir system depending on its solubility as shown in Figure ES-4. Similar to radium and thorium, the majority of uranium in tailings settle in the bed sediments. Therefore, uranium-contaminated sediments will also be prone to re-suspension multiple times over the years as discussed earlier in the case of radioactivity-contaminated sediments.

Conclusions

Simulation results and conclusions derived as a result of the preliminary assessment were based on the best available information. These conclusions could be impacted depending on the variation in key parameters, such as the dam height for the uranium tailings containment structure, sediment concentration in the tailings, radioactivity level, uranium content, solubility

characteristics of radiological elements and uranium, and the particle size distribution.

- A catastrophic failure of a uranium tailings containment structure could significantly increase radioactivity concentrations in the river/reservoir system and exceed the MCL established for radiological contaminants for drinking water for an extended period of time.
  - The MCL for gross alpha activity in Kerr Reservoir (water column) could be exceeded by an order of magnitude.
  - The gross alpha activity in Kerr Reservoir (water column) could remain above the MCL for several months or more after the failure.
- A significant amount of radioactivity remains in the river/reservoir system after a year following a catastrophic tailings dam failure.
  - The majority of radioactivity that enters the river/reservoir system as a result of a failure remains in bed sediments a year after the failure while dissolved and suspended radionuclides in the water column are flushed downstream.
  - Subsequent floods could re-suspend sediments and increase radioactivity concentration in the water column above the MCL established for radiological components for drinking water.

- Uranium concentrations in the water column may temporarily reach or exceed the MCL limit of 30 µg/L depending on its solubility.
  - Solubility of uranium appears to significantly affect its presence in the river/reservoir system. The more soluble the uranium, the faster it flushes out of the river/reservoir system to downstream water bodies. If the uranium is less soluble, the majority remains in the system deposited at the bottom of the river/reservoir system and can be re-suspended by subsequent floods.
- Reservoir operations (varying reservoir level to accommodate operational demands) may affect the arrival and residency time of radioactivity in Kerr Reservoir.
  - Length of radioactivity residence time in the reservoir depends on the inflows – higher flows flush radionuclides faster and reduce residence time; lower flows, on the other hand, increase residence time.

RESOLUTION REQUESTING THAT THE VIRGINIA GENERAL ASSEMBLY MAINTAIN THE CURRENT MORATORIUM ON URANIUM MINING UNTIL THE COMPLETION OF SCIENTIFIC STUDIES EVALUATING THE RISK OF CONTAMINATION OF DRINKING WATER SUPPLIES AND HARM TO THE PUBLIC HEALTH.

WHEREAS, the Commonwealth of Virginia currently enforces a moratorium on uranium mining; and

WHEREAS, a large uranium reserve, estimated to consist of over 100 million pounds of uranium, is located in Pittsylvania County, Virginia ("Uranium Reserve"); and

WHEREAS, Virginia Uranium, Inc. owns, or has an ownership interest in, the Uranium Reserve and wishes to begin mining operations; and

WHEREAS, Virginia Uranium, Inc. has asked the Virginia General Assembly to lift the moratorium on uranium mining; and

WHEREAS, the mining of uranium requires grinding of the ore to small particles, a process known as "milling," which produces vast quantities of waste material known as "tailings;" and

WHEREAS, tailings are typically radioactive and can adversely affect public health if not properly confined; and

WHEREAS, historically, tailings containment structures in the United States have been known to

fail and release radioactive uranium tailings to downstream surface waters; and

WHEREAS, the mining and milling of the Uranium Reserve poses a risk of environmental contamination in the event the containment structures for the tailings fail due to structural defect, substantial flooding or other cause; and

WHEREAS, no uranium mines or tailings containment structures have been constructed in an area, such as southern Virginia, that is subject to frequent tropical storms, hurricanes, nor'easters, and other storm events that have produced precipitation approaching the Probable Maximum Precipitation (PMP), as defined by the National Weather Service; and

WHEREAS, based on a lack of data and experience with areas prone to frequent storm events and also having surface water hydrology conducive to erosion and structural damage, there has been no reasonable assurance that uranium mining can be performed safely in southern Virginia; and

WHEREAS, it is well-documented that long-term exposure to radioactive tailings released from a failing or failed confinement structure would be harmful to human health; and

WHEREAS, the Uranium Reserve is located upstream of the Roanoke River, the Banister River, the John H. Kerr Reservoir ("Kerr Reservoir") and Lake Gaston; and

WHEREAS, the mining and milling of the Uranium Reserve could result in the contamination of downstream drinking water supply sources, including the Roanoke River, Kerr Reservoir and Lake Gaston; and

WHEREAS, the City of Chesapeake owns one-sixth of the Lake Gaston project ("Project") operated by the City of Virginia Beach and is entitled to one-sixth of the drinking water produced by the Project; and

WHEREAS, the Project's raw water intake on Lake Gaston is downstream of the proposed mining and milling of the Uranium Reserve; and

WHEREAS, in light of the potential risk to the Lake Gaston drinking water supply, the Chesapeake City Council adopted a legislative position in 2011 urging the Virginia General Assembly to maintain the moratorium on uranium mining until such time that conclusive evidence demonstrates that uranium mining is safe for the environment and the health of the citizens of Virginia; and

WHEREAS, the City of Virginia Beach, Virginia, commissioned an impact study to determine the risks posed to the Lake Gaston water supply in the event the moratorium is lifted, the uranium mining commences and a storm-based breach of the tailings confinement structure occurs; and

WHEREAS, the Virginia Beach study, entitled, "A Preliminary Assessment of Potential Impacts of Uranium Mining in Virginia on Drinking Water Sources," was released in late January of 2011; and

WHEREAS, the Virginia Beach study indicates that a release of tailings into the Kerr Reservoir and Lake Gaston will require anywhere between two months and two years, depending on the amount of rainfall, to flush dissolved and suspended contaminants from the impacted water bodies; and

WHEREAS, the Uranium Mining Subcommittee of the Virginia Coal and Energy Commission has also initiated a technical study to determine whether tailings pose an unacceptable safety and health risk and have the potential to contaminate drinking water supplies; and

WHEREAS, the Virginia technical study, which has been undertaken by the National Academy of Sciences, is expected to be completed by the end of this calendar year; and

WHEREAS, the Chesapeake City Council requests that the Virginia General Assembly refrain from lifting the moratorium on uranium mining in Virginia until (i) the technical study by the National Academy of Sciences, and any other related studies, are completed and released to the public, (ii) adequate time to review, process and reconcile the results of all studies has been afforded to the scientific community, environmental organizations, civic associations representing the interests of the citizens of Virginia and North Carolina, and state and local legislative governing bodies, boards and commissions; and (iii) the studies are found to have thoroughly evaluated the risks, and concluded with a reasonable degree of scientific

certainty that there will be no significant release of radioactive tailings downstream of the Uranium Reserve and that the public health and safety, as well as the integrity of the environment, can be adequately protected against harm.

NOW, THEREFORE, BE IT RESOLVED by the Council of the City of Chesapeake, Virginia, that the Virginia General Assembly maintain the moratorium on uranium mining in Virginia until (i) the technical study by the National Academy of Sciences, and any other related studies, are completed and released to the public, (ii) adequate time to review, process and reconcile the results of all studies has been afforded to the scientific community, environmental organizations, civic associations representing the interests of the citizens of Virginia and North Carolina, and state and local legislative governing bodies, boards and commissions; and (iii) the studies are found to have thoroughly evaluated the risks, and concluded with a reasonable degree of scientific certainty that there will be no significant release of radioactive tailings downstream of the Uranium Reserve and that the public health and safety, as well as the integrity of the environment, can be adequately protected against harm.

BE IT FURTHER RESOLVED that a copy of this Resolution be sent to the Virginia General Assembly and to the City of Chesapeake Members of the House of Delegates and the Virginia Senate.

[SEAL]

RESOLUTION
SUPPORTING THE CONTINUED BAN
ON URANIUM MINING IN VIRGINIA

Resolution No. _____
May 14, 2013

WHEREAS, a National Academy of Science report of 2011 raises many questions as to the health, safety and welfare of these mining activities impacting citizens of Virginia given our climate issues; and

WHEREAS, research shows that tailings pit liners can last 100 to 200 years. These tailings are reported to remain radioactive for well over 100,000 years, raising the questions as to whether "state-of-the-art" technology can protect our water supplies; and

WHEREAS, during the summer of 2012, the Virginia Department of Health heard 80-90% negative testimony in their series of four public forums on the subject; and

WHEREAS, escrow funds set aside for decommissioning, damage repair from devastating environmental impacts and perpetual care have been chronically inadequate, leaving taxpayers to bear the cost of stabilizing radioactive "Superfund" sites in five western states costing 100's of millions of dollars; and

WHEREAS, allowing the mining and milling of uranium in Virginia would place health and environmental risks on all citizens for the gain of a single industry, and thus far, a single company; and

WHEREAS, local governmental bodies in jurisdictions, home to more than 2.75 million Virginians have passed resolutions in support of Virginia's moratorium on uranium mining, joined by statewide organizations including the Medical Society of Virginia, Virginia Farm Bureau Federation, NAACP and the United Methodist Conference of Virginia; and

WHEREAS, when reasonable people raise reasonable questions and many of these questions go unanswered satisfactorily, serious doubts are logically raised;

NOW, THEREFORE, BE IT RESOLVED when it comes to the health, safety and welfare of Virginia citizens – when in DOUBT – DON'T. The ban on uranium mining and milling in Virginia should become permanent until the industry can unequivocally demonstrate it can be done without threats to our citizens in perpetuity.

BY ORDER OF COUNCIL OF THE
TOWN OF CULPEPER, VIRGINIA

_____

Calvin L. Coleman, Jr., Mayor

ATTEST:

_____

Kimberly D. Allen, Town Clerk

KEEP the BAN
On Uranium Mining in Virginia

Protect Our Health, Our Heritage and Our Future

www.KeepTheBan.org

KEEP THE BAN On Uranium Mining in Virginia

In 1982, Virginia established a ban on uranium mining after geologists discovered deposits of the radioactive metal throughout the state.

Today, foreign-backed interests are trying to lift the ban so they can mine and process uranium in Virginia.

While the focus is on a site called Coles Hill in Pittsylvania County; if the ban is lifted it will be lifted statewide.

There are numerous environmental, human, health and economic repercussions if mining were to occur in Virginia.

Do You Value Bountiful Lands, Healthy Soils and Safe Water for Your Children?

Mining and processing uranium in Virginia has been flagged by the international scientific community as potentially harmful to agriculture, drinking water, property values, tourism and human health.

Concerned? What can YOU do?

Call your House of Delegates and State Senate representatives, send the attached letter or setup a community education event. Education of the risks is critical.

To request presentation materials for your church, club or neighbors, visit www.KeepTheBan.org or call 804-644-0283.

The Problem is . . .

Uranium mining and processing produces waste material known as 'tailings' commonly found to include radium, thorium and various harmful heavy metals linked to severe health effects. The Coles Hill site would generate at least 28 million tons of mine and mill waste.

After studying the issue for over two years, at a cost of $1.4 million, the National Academy of Sciences found there were "steep hurdles" to mining in Virginia.

In the 1980's, uranium leases were purchased on thousands of acres of land in Fauquier, Orange, Culpepper [sic], and Madison counties of Virginia. Those leases are now lapsed, but the potential uranium deposits remain. Localities have since passed resolutions in support of the current Virginia ban, but Virginia needs your support against the foreign interests.

For more information on the environmental effects and various scientific study results, visit our website.

www.KeepTheBan.org

The Keep The Ban Campaign was created by local and state organizations to maintain the existing ban on uranium mining in Virginia. More than 11,000 citizens have stated their support for the ban to the General

Assembly, and over 100 government entitles and non-profit groups in both Virginia and North Carolina have expressed deep concern about lifting Virginia's 30-year ban on uranium mining.

Case Study

A 2012 Virginia Beach engineering study shows that if a major uranium mill tailings waste spill occured at Coles Hill, contaminates would flow from the Bannister River to Kerr Reservoir and Lake Gaston, a source of drinking water for Virginia Beach and its neighbors. This would raise the radiation level in the Kerr Reservoir 10-20 times above the level outlined in the Safe Drinking Water Act. Radioactive contaminants could take two months to two years to flush out of Lake Gaston.

Keep the Ban Steering Committee:

Dan River Basin Association
League of Individuals for the Environment
Piedmont Environmental Council
Piedmont Residents In Defense of the Environment
Roanoke River Basin Association
Sierra Club – Virginia Chapter
Southern Environmental Law Center
Virginia Conservation Network
Virginia Interfaith Power and Light
Virginia League of Conservation Voters

Dear Public Officials,

Virginia has held a ban on uranium mining for nearly 30-years. I strongly encourage you to maintain that ban in order to preserve our drinking water, human health, farmland, property values, wildlife and tourism across Virginia.

I am concerned that radioactive and toxic waste would be left in Virginia soils for centuries near farmlands and local waterways if the ban is lifted and mining ensues. Also, I am aware that exposure to uranium waste has been found to increase the chance of contracting leukemia, kidney disease and other severe health problems.

Continue the good work by maintaining the ban on uranium mining.

Protect Our Health, Our Heritage, and Our Future. Keep The Ban on uranium mining.

Signature _____
Name _____
Email _____
Phone _____
City _____ State _____
Zip _____

Fill out this tear-off petition, add a stamp and mail to the address listed on the reverse side or sign the Keep The Ban petition at www.KeepTheBan.org

Southern Environmental Law Center [LOGO]

Latest News

January 13, 2014
Uranium mining shelved in Virginia – for now

Facing political realities, the company that has been pushing to develop a uranium mine in southern Virginia has put its plans on hold. That should bring a sigh of relief to the 1.1 million people in Virginia and North Carolina whose water supplies would be downstream from the mining operation and its waste, which remains radioactive for thousands of years. After Governor-elect Terry McAuliffe took a bold stance on this issue and pledged to veto any pro-uranium legislation that reached his desk, the parent company of Virginia Uranium, Inc., disclosed that it is suspending its campaign to repeal the state's longstanding ban on uranium mining. Working with a broad coalition of local governments, business leaders, health advocates, and conservation groups, SELC has been a leading defender of the ban and will continue to educate decision-makers about the health and environmental risks of lifting the freeze. We will also continue to highlight a National Academy of Sciences study that confirmed many of our concerns about uranium mining in Virginia, where hurricanes, heavy rains, and other severe weather events can overwhelm waste systems.

Keep the Ban on Uranium Mining in Virginia

In 2007, Virginia Uranium, Inc. went public with plans to exploit a major uranium deposit in Pittsylvania

County, in southern Virginia. The operation would entail extensive mining, a milling facility, and disposal of massive amounts of waste that would leave a toxic and radioactive legacy for centuries.

The deposit at the Coles Hill farm was discovered years ago, but in 1982, the Virginia legislature enacted a statewide ban on uranium mining that still exists today. The industry failed to secure the support it needed to introduce legislation to repeal the ban in the 2012 General Assembly, but it mounted an intensive lobbying effort and introduced legislation in 2013. After a groundswell of opposition from local governments and business, health, and environmental groups, the legislation was pulled due to lack of support.

SELC is at the forefront of a statewide citizen effort, the *Keep the Ban Coalition*, to ensure the ban stays in place.

Uranium Mining: A Dangerous Proposal

Uranium occurs naturally in the ground, but when exposed to air and water, radiation is released into the environment. There is no precedent for large-scale uranium mining in the East, where the population density and a wet climate increase the chance of radiation contaminating streams and groundwater and exposure to humans.

In the last century, the Commonwealth has been hit by at least 78 category-strength hurricanes, including Hurricane Camille in 1969, which dumped 31 inches of

rain on central Virginia. In 2011, at least 37 tornadoes were recorded in Virginia, including one in Halifax County about 20 miles from the Coles Hill site. And in August, 2011, an earthquake of 5.8 magnitude rocked Virginia; its epicenter was just 125 miles from Coles Hill.

Virginia has no regulations for uranium mining, and, with less than 1% of the state's general fund revenues dedicated to environmental programs, is ill-prepared to sufficiently oversee the industry. The federal government has virtually no experience regulating uranium mining in a wet climate.

The only peer-reviewed study of the issue, conducted by the National Academy of Sciences, validates many of our concerns, including risks to water quality from radioactive tailings, and the fact that current federal regulations are inadequate to protect public health and the environment from potential impacts of uranium mining in Virginia. The National Academy's work provides clear, objective evidence that the state's ban on uranium mining should not be lifted.

High Health and Economic Risks

The potential health impacts of exposure to uranium and mining chemicals are well-documented in global studies of people working in and living near mines, and include lung cancer, bone cancer, leukemia, birth defects, weakened immune systems, hormone disruption, and damage to DNA, the kidneys and the liver.

Virginia Beach, which gets its drinking water from Lake Gaston, downstream of the Coles Hill site, released a study concluding that a catastrophic failure of a uranium waste containment structure at the site could contaminate the city's drinking water for as long as two years.

Establishment of a uranium industry in southern Virginia would strangle efforts to diversify the region's economy and threaten existing businesses – including agriculture, tourism, and recreational fisheries. As one study showed, the costs to Virginia in a worst-case disaster are almost double the benefits of the best-case economic scenario.

One of America's Most Endangered Rivers

The potential for mining uranium exists throughout the state; in the early 1980s, the industry leased hundreds of properties in Culpeper, Fauquier, Henry, Madison, Orange, Patrick, and Pittsylvania counties.

But the focus now is on the Coles Hill site Pittsylvania County, located in the heart of the Roanoke River watershed. In May 2011, American Rivers named the Roanoke one of the **10 most endangered rivers** due to the threat of uranium mining.

SELC continues to work with the Keep the Ban Coalition and others to educate Virginia citizens and lawmakers about the dangers of uranium mining and to press the state to keep the ban.

Ad Campaign

SELC and its *Keep the Ban* coalition partners ran ads in the *Danville Register & Bee* and *Chatham Star-Tribune* extolling the environmental and economic assets of Southern Virginia that could be compromised should the current ban on uranium mining in Virginia be lifted. These ads feature the region's strong *tourism*, *recreation*, and *agriculture* that would be threatened by uranium mining. In addition, over *60 governments, businesses, and organizations* have passed resolutions to support continuation of the ban.

Milling 'driving issue' of uranium controversy

BY MARY BETH J ACKSON
mjackson@registerbee.com (434) 791-7981
Posted: Monday, December 10, 2012 7:18 pm

The process of taking solid rock containing uranium ore, crushing it and using chemicals to leech out the useful uranium – which is referred to as "milling" – is one of the more controversial parts of the uranium mining issue facing Pittsylvania County and Virginia.

Cale Jaffe, senior attorney for the Southern Environmental Law Center, and Delegate Don Merricks, R-Pittsylvania County, sided with one another on the uranium milling issue during last week's recent panel discussion in Richmond, saying the "what-ifs" have not been sufficiently addressed.

"It's the milling part of the process that gives me great pause and reservation," Merricks said.

Virginia Uranium Inc. wants to mine and mill a 119-million-pound uranium ore deposit located about six miles from Chatham. Sen. John Watkins, R-Powhatan, has said he will sponsor a bill directing the state to write regulations for uranium mining and milling, which would effectively [sic] the moratorium if signed into law.

Merricks added, "I do not like putting years of containment on citizens of the commonwealth." The leftover waste rock from the milling process – called tailings – would still be radioactive and would have to be monitored for generations.

Jaffe, calling milling "the driving issue," agreed.

"You're dealing with a significant amount of mill tailings waste that retains about 85 percent of its radioactivity," Jaffe said. "Managing that for the long term is what's driving the debate."

Jaffe says "Is it safe or unsafe?" is the wrong question to be asking.

"We see the risks as significantly outweighing the potential benefits," Jaffe said. "We're looking at a particularly high-stakes gamble. It's not a risk Virginia should take."

Locke said the question of lifting the moratorium comes down to weighing risks against benefits.

"If you have best practices and you're vigilant . . . you can mitigate some of the risk. You can never eliminate all of the risk."

He added, "We do the best we can, which can be very, very good."

Regulation will never mitigate all the risks associated with uranium mining and milling, said Paul Locke, chairman of National Academy of Sciences panel on Uranium Mining in Virginia. "You can never have a regulatory framework that eliminates all the risks," Locke said.

Locke expressed caution. He noted that no climate where uranium mining and milling has been done is completely equal to Virginia's own. He stopped short of weighing into the debate.

"I'm really not prepared to do that," he said. "Whatever opinion I have would generate more heat than light."

Patrick Wales, a geologist and spokesman for Virginia Uranium, pointed to mines in Canada and France as examples of places uranium has been mined safely. The company has paid for local officials and legislators to visit those sites, including Watkins.

"Their [opponents'] claims that the public health and environment are at risk is fundamentally wrong," he said.

Wales said the company would do all it could to keep things safe for employees and citizens, because it's their community too.

"One thing that is often overlooked is the employees of Virginia Uranium are residents of Danville and Pittsylvania County," he said. "We bring a deeply moral and personal commitment as well."

Uranium likely to be hot topic

Posted: Wednesday, December 19, 2012 7:00 pm

The possibility of lifting a 30-year ban on uranium mining in Virginia will be a hot topic in the 2013 General Assembly when it convenes Jan. 9, according to local lawmakers.

It will be "a nuclear issue, no pun intended," Del. Danny Marshall, R-Danville, told local business leaders and government officials during the Martinsville-Henry County Chamber of Commerce's annual Pre-legislative Breakfast on Tuesday at the Virginia Museum of Natural History.

Uranium is a radioactive element used to make nuclear power and weapons. The ban was enacted in 1983 after scientists voiced concerns that uranium mining could harm the environment and public health.

Virginia Uranium Inc. wants the ban repealed so it can mine and mill uranium at a location near Chatham thought to be one of the world's largest deposits of the metal. The company maintains the mine would create hundreds of jobs and its operations would be safe.

Three of the four lawmakers who spoke during the breakfast oppose uranium mining.

By focusing on job creation, the company was "very smart in its approach" to try and convince people to favor repealing the ban, Marshall said.

Yet based on his understanding of mining processes, Marshall said for every 2,000 pounds of materials mined, only a pound would be actual uranium.

The rest would be "tailings" left behind with radioactivity that could take thousands of years to dissipate, he said.

Heavy rains and high winds could spread those radioactive materials over long distances, perhaps to other states, according to Marshall.

Del. Don Merricks, R-Pittsylvania County, said uranium is found throughout Virginia but studies have shown that the site the company wants to mine is the only potentially viable uranium mining location in the state.

"I could live with the mine" itself, Merricks said. "The problem is the stuff that's left" after mining occurs, essentially "forever."

"I don't think we're ready for uranium mining," added state Sen. Bill Stanley, R-Glade Hill. "The risk is too great."

Del. Charles Poindexter, who also is a Glade Hill Republican, did not discuss his opinions on uranium mining during the breakfast.

Poindexter previously has indicated he was waiting for a report on what a regulatory framework should look like before he forms any opinions.

Among other topics discussed at the breakfast were transportation and the potential of federal sequestration – although only state lawmakers attended the event.

Sequestration refers to roughly $1.2 trillion in across-the-board spending cuts that will occur Jan. 1 if Congress and President Barack Obama cannot reach agreements on budget issues.

Federal lawmakers have "some hard decisions" to make, Merricks said. He added that Republicans and Democrats have to work together to make the decisions because lawmakers from one party cannot do it alone.

The federal government must generate new revenues as well as reduce spending, he said. "It's going to hurt to cut the budget, but it's got to be done," he added.

Any cuts to defense spending could greatly impact Virginia because the state has a lot of defense-related industries, lawmakers noted.

Poindexter said he wants to see the four-lane expansion of U.S. 58 finished and the construction of Interstate 73 begin.

Other lawmakers indicated they feel the same way.

But if people want highway improvements, "somebody's got to pay for" them, Merricks said.

Ideas along that line include charging tolls along some highways and raising taxes on vehicle fuels, Poindexter said.

He said, though, that many lawmakers from rural areas are opposed to higher fuel taxes because right now, 42 cents of every $1 collected from gasoline taxes goes to help fund rail systems in Northern Virginia.

The Connection

Column: Uranium Mining in Virginia

By Kenneth R. "Ken" Plum/State Delegate (D-36)
Wednesday, July 11, 2012

Virginia has one of the largest deposits of uranium of anyplace in the country in Pittsylvania County in the southern part of the state. The location of Coles Hill Farm where the deposit is centered is in the Roanoke River watershed. There are smaller deposits of uranium in other parts of the state including the Piedmont region.

Because of the risks to public health, Virginia enacted a ban on uranium mining in the state in 1982 that is still in place today. With increased prices for the sale of uranium there has been renewed interest in mining the uranium that is in Virginia. In 2007, Virginia Uranium, Inc. announced plans to seek to lift the ban in Virginia in order that uranium could be mined in the state. A study was undertaken by the National Academy of Sciences to determine the safety of lifting the ban.

There is no precedent for large-scale uranium mining in the eastern part of the United States where population density and a wet climate increase the chance of radiation contaminating streams and groundwater and exposure to humans, as the Southern Environmental Law Center pointed out. They go on to state that in the last century Virginia has been hit by at least 78 category-strength hurricanes, and in 2011 there were 37 tornadoes in the state including one

within 20 miles of the proposed mining site. The earthquake in Virginia in August, 2011, of 5.18 whose effects were felt all the way to New York had its epicenter just 125 miles from the proposed site.

In addition to the National Academy study, the City of Virginia Beach which gets its drinking water from Lake Gaston downstream of the Coles Hill site funded a study finding that a catastrophic failure of a uranium waste containment structure at the site could contaminate the city's drinking water for as long as two years.

Although legislation to lift the ban has been talked about, the serious concerns about the health risks and the strong community opposition have kept any bills from being debated. Despite the fact that the legislature has not acted, Governor Bob McDonnell appointed a task force to write regulations that would need to be met if the ban was lifted. That group is now at work and has been strongly criticized for the lack of transparency in its work. There is a great likelihood that the regulations that are developed will be used as a justification for lifting the ban. There are well-funded industry lobbyists at work actively looking for ways to get around the ban. Environmental groups are also actively working to keep the ban in place.

The threat to human health outweighs any arguments for lifting the ban. I remain opposed to lifting the ban and will be sensitive to any efforts to circumvent the ban through the regulatory process.

Loudoun Democrats [LOGO]
LOUDOUN COUNTY DEMOCRATIC COMMITTEE

Herring Opposes Lifting Ban on Uranium Mining

Democratic candidate for Attorney General State Senator Mark Herring (Loudoun & Fairfax) released the following statement today announcing his opposition to legislation that would lift the ban on uranium mining and milling in Virginia:

"Over the past year, I've had the opportunity to meet with interested stakeholders on both sides of the debate over whether to end the ban on uranium mining and milling in Virginia. I have carefully considered their positions, as well as the scientific evidence, and I have concluded that ending the ban on uranium mining and milling is not the right course for our Commonwealth.

Therefore, I will oppose legislation during the upcoming 2013 General Assembly session that would lift the ban. Additionally, I plan to introduce budget language that would prohibit any state funding from being used to promulgate regulations designed to circumvent the ban.

The Governor should not be using taxpayer dollars and staff resources to create the regulatory framework for uranium mining, which is currently prohibited by state law.

The health and safety of the public, and of the environment, should be of paramount concern when considering issues such as this and I am simply not convinced

that uranium mining can be conducted in Southside Virginia in a safe and environmentally responsible way. I take very seriously the concerns raised by citizens, business leaders and local officials in both Southside and Hampton Roads who have expressed to me their fears with regard to the potential for negative public health impacts, particularly water supply contamination.

I look forward to working with those same citizens, business leaders and local officials on ways we can improve and expand economic opportunity in Southside and diversify Virginia's portfolio of domestic energy resources."

Jeff E. Schapiro: McAuliffe looks to bury uranium issue

Jeff E. Schapiro

jschapiro@timesdispatch.com | Posted: Wednesday, November 13, 2013 12:00 am

Terry McAuliffe is issuing his first veto—and he hasn't been sworn in as governor yet.

In Norfolk on Monday, the Democrat declared he would reject legislation lifting Virginia's three-decade ban on uranium mining. McAuliffe said he wouldn't even allow the state to write safety regulations; specifically, for a proposed mine in Pittsylvania County, hundreds of miles upstream from Hampton Roads, which draws its water, via pipeline, from a lake near the mine site.

Given that McAuliffe has always been a skeptic on uranium mining, it should not come as a surprise that he is willing to use the full weight of the governorship to block it. What may come as a surprise is that, after running from his dealmaking past, he now seems willing to be seen as a dealmaker.

The environmental interests that supplied McAuliffe, directly and indirectly, with at least $10 million in cash and services expect something for their money and trouble. So do Virginia Beach Mayor Will Sessoms and other anti-uranium Republicans in Hampton Roads who broke with their party to support McAuliffe over GOP nominee Ken Cuccinelli, a mining proponent.

And then there are the voters: The cities of Norfolk, Portsmouth, Chesapeake and Suffolk—all on record demanding the legislature preserve the prohibition on uranium mining—fell to McAuliffe in the election last week. He barely lost Virginia Beach, the state's largest city and the loudest voice in the anti-uranium choir.

"I don't support uranium mining," McAuliffe told The Virginian-Pilot of Norfolk after a Veterans Day ceremony. "First and foremost as governor, my job is to make sure that our communities and our citizenry are safe. I'm not comfortable with the science to the point that I can say that with uranium mining, we would be safe. I'm afraid it would get into the drinking water."

And so, the latest phase in the contentious, continuing debate over uranium mining may end before it begins, perhaps snuffing out the issue for the next four years—possibly longer, depending on the arc of the economy. Even if the industry cobbles the votes to get a bill to McAuliffe, it is unlikely it could summon the required two-thirds of the House and Senate to override a veto.

It's no accident McAuliffe said what he said when he said it and where he said it.

McAuliffe's victory is still fresh in people's minds. It would not have been possible without a near-sweep of Hampton Roads cities. That relied, in part, on the backing of elective officials. Among them: Sessoms and another mining opponent, Norfolk Mayor Paul Fraim.

As a candidate, McAuliffe had to hedge on uranium, if only a bit. Perceived flexibility on a sensitive issue can provide entree to a broad array of voters.

As McAuliffe told FairfaxTimes.com in October, " believe that right now the environmental risks of uranium mining are much too high. . . . Generally I know that, when properly crafted, we can advance policies that protect our environment, grow our economy and keep electric rates low for Virginia."

As a governor-elect, McAuliffe doesn't have to equivocate. A firm stance on a sensitive issue is a way of reassuring his voter base.

That's why McAuliffe told The Pilot that he would not allow the state to even develop regulations: " would we be wasting our time and resources drafting regulations if we're not going to lift the moratorium?"

McAuliffe's pronouncement could discourage the industry from renewing in January its push for the General Assembly to authorize regulations or lift the 1982 moratorium. But if the industry, fortified with $25 million from Canadian mining interests, isn't pushing, does it run the risk of discouraging its investors? Like McAuliffe's deep-pocketed backers, they expect something for their money and trouble.

McAuliffe's hardened stance may have a more immediate effect.

This afternoon in Norfolk, the Hampton Roads Chamber of Commerce is scheduled to hear presentations on uranium mining, pro and con. The business

organization may finally take a position on a matter on which it has preferred studied silence. The chamber's non-position, its unstated neutrality, had been a boon for pro-uranium forces. It meant they had one less battle to fight—and in a region with many people and even more economic power.

That economic clout is largely dependent on tourism and the military, both of which would be imperiled, uranium foes contend, if the Hampton Roads water supply were tainted by radioactive runoff, à la Fukushima. The industry says technological advances greatly minimize risks to the public. It's a point made in writing: A billboard erected last month by Virginia Uranium Inc. on U.S. 29 welcomes visitors to Pittsylvania County—"future home of the safest uranium mine in the world."

At the height of the gubernatorial campaign, another quieter campaign was unfolding. Lobbyists and experts for both sides in the uranium fight fanned across rural Southside and urban Hampton Roads, making their case—largely in anticipation of a potentially decisive vote by the Hampton Roads chamber.

But the group has been upstaged by McAuliffe and his veto threat. The guy who ran from his showman past suddenly—and on cue—reverted to form.

October 13, 1978

CONGRESSIONAL RECORD—SENATE

[36687] H.R. 13650—AN ACT TO AUTHORIZE THE SECRETARY OF ENERGY TO ENTER INTO COOPERATIVE AGREEMENTS WITH CERTAIN STATES

* * *

[36694] • Mr. HANSEN. Mr. President, I rise in strong support of the Residual Radioactive Materials Act of 1978. S. 3078. The Energy and Natural Resources Committee is proposing an amendment in the nature of a substitute to the committee-reported version of S. 3078. The committee amendment is a modification of the House-passed companion legislation, H.R. 13650, the Uranium Mill Tailings Radiation Control Act of 1978. The modifications to H.R. 13650 contained in the committee amendment reflect many of the policy decisions adopted in the Energy Committee's consideration of this legislation.

Very briefly, Mr. President, this legislation is the outgrowth of congressional concern originally manifested in Public Law 92-314, which authorized the old Atomic Energy Commission to conduct remedial action cleanup operations in Grand Junction, Colo. At the time of our consideration of that legislation in the 92d Congress, the Federal Government became convinced that the use of uranium mill tailings in the construction of many buildings and facilities in Grand Junction, Colo., after the mill tailings had accumulated

from our Nation's nuclear weapons program, constituted a serious health hazard to the inhabitants of that Colorado town. Consequently, the Atomic Energy Commission was directed in 1974 to review other possible sites where similar mill tailings accumulations might also constitute a threat to public health and safety. Over the past 3 years, the Commission and its successors, first, the Energy Research and Development Administration, and then, the Department of Energy, have reviewed systematically all of the known, significant accumulations of uranium mill tailings resulting from the nuclear weapons program. This same concern also has been the subject of several very detailed reports by the General Accounting Office and by the various State and university organizations in the affected States.

All of the aforementioned activity resulted in the administration's conclusion at the beginning of this year that these mill tailings sites did constitute a [36695] serious public health and safety hazard which should be the subject of Federal remedial action as soon as possible. The hearings before the Energy and Natural Resources Committee, as well as the two House committees of jurisdiction, the Interior and Insular Affairs Committee and the Interstate and Foreign Commerce Committee, verified the accuracy of the studies that had been done and the conclusions which have been drawn by the administration and others who have evaluated this problem. On that basis, the administration submitted S. 3078 which was introduced by Senator JACKSON by request. Similar

legislation had been introduced by Senator GARN and a number of bipartisan cosponsors, including Senators HATCH, DECONCINZ, MCCLURE, DOMENICI, LAXALT, HANSEN, WALLOP, and SCHMITT, in S. 3008, and later by Senator HART and a number of bipartisan cosponsors, including Senators DOMENICI, GARN, HATCH, and LAXALT, in S. 3253. All of these bills reflect the basic judgment that the mill tailings located at sites now inactive do constitute a serious threat to public health and safety that should be the subject of remedial action to stabilize the mill tailings in order to protect public health and safety and the environment. These various bills addressing this fundamental concern adopted somewhat different schemes for achieving that consensus result, but basically all of the introduced bills proposed action now to initiate the required remedial action.

* * *

ATOMIC ENERGY ACT OF 1946

HEARINGS

BEFORE THE

SPECIAL COMMITTEE ON ATOMIC ENERGY

UNITED STATES SENATE

SEVENTY-NINTH CONGRESS

SECOND SESSION

ON

S. 1717

A BILL FOR THE DEVELOPMENT AND CONTROL OF ATOMIC ENERGY

PART 3

FEBRUARY 7, 8, 11, 13, AND 14, 1946

Printed for the use of the Special Committee on Atomic Energy

[LOGO]

UNITED STATES

GOVERNMENT PRINTING OFFICE

81930 WASHINGTON: 1946

* * *

[318] Mr. KETT. In regard to product disposal, namely uranium, it must be emphasized that the

Government should have full control of such uranium products and that the processes used make such complete control a very simple matter.

Generally speaking, individual vanadium deposits are small; new deposits must be constantly developed and brought into production or the whole vanadium-mining industry in the United States of American will eventually—and not very far in the future—have to stop for lack of ore. Therefore, restrictions on vanadium production will automatically restrict efficient uranium recovery, if not make such recovery impossible. Whether the uranium is currently recovered in the vanadium process or allowed to go through the process into the impounded tailings for future recovery, the whole vanadium mining industry and the western plant facilities must be kept entirely healthy and in their highest state of efficiency as long as uranium in any quantity may be required at short notice.

We think that the right of location and patent—that is the patented ground, the mining property—should be expressly stated, at least where such location is made primarily and in good faith for elements other than radioactive ores.

We think that the right of condemnation and seizure should not be extended to mining properties, or to plants which are capable of producing radioactive elements but whose main operation is the production [319] of elements that are not radioactive, and which plants could operate without production or appreciable loss, actual or potential, of radioactive elements.

We think that S. 1717 should offer such facilities and protection to the vanadium producer as to stimulate to the utmost in the United States of America the search for and development of new sources of vanadium and its associate element, uranium.

The CHAIRMAN. Before you go into your summary, Mr. Kett, what specifically do you suggest should be incorporated in S. 1717 to accomplish that objective?

Mr. KETT. Taking the bill itself, on page 9, line 2, I will read that sentence, incorporating our suggestions:

The term "source materials" shall include any ore *after but not before mining, extraction, and removal from its Place of origin* containing uranium, thorium, or beryllium * * * . [italics indicate suggested insertion.)

That would cure the whole business. That would simply mean that anything still in the ground is not to be controlled. In other words, no Government department can take out 3,000,000 acres from circulation and say, "You cannot locate claims here, or patent claims, or have anything to do with it."

Senator HICKENLOOPER. You would still retain the independent prospecting rights and location?

Mr. KETT. I mean that the mining law should not be changed at all. Anybody should be allowed to stake out a claim, work it, and patent the claim, after which they own it in fee simple, with no restrictions on the prospecting, location, and development of claims

containing vanadium and uranium, which it always contains out there.

Senator HICKENLOOPER. Just watch them after they get the ore out of the ground?

Mr. KETT. The minute the stuff is mined, OK—all the control you want on it; but don't stop free prospecting for the materials.

The CHAIRMAN. That would seem to me to be rather sensible. After all, what we are interested in is the uranium with no disposition, at least on my part, to try to control vanadium or any other useful metal that doesn't have fissionable possibilities.

Mr. BRANSOME. Mr. Chairman, I might add this: You have a few hundred small producers out there that are constantly prospecting for ore, producing it and selling it to the people that treat the ore. You certainly don't want to restrict those fellows.

In this bill at one point it goes beyond source materials and says:

the Commission shall arrange for the exclusive operation of facilities employed in the manufacture of fissionable materials by employees of the Commission.

This in itself is so restrictive that it seems to me you have pulled a curtain down on all the progress of the development of fissionable materials except by a few people in the Government, who may or may not have the urge to go ahead in accordance with the

dictates of their own desires to improve scientific knowledge.

The CHAIRMAN. I think that ought to be changed. Of course the intent is the package product, and not of course the ores in the ground.

Mr. BRANSOME. But it is poorly worded in there, Mr. Chairman, if I may presume.

The CHAIRMAN. Will you cite the page?

[320] Mr. BRANSOME. It is page 7, line 10. That is beyond our source material job, but if that ever starts it will go back to source material, in my opinion.

The CHAIRMAN. You suggest the use of the word "manufacture" rather than "mining."

Mr. BRANSOME. That is right. As I say, I am going beyond the source materials into fissionable materials, but these words "by employees of the Commission," in my opinion, are impracticable.

The CHAIRMAN. Of course, everybody should be permitted to mine the material.

Mr. BRANSOME. Well, you mine the material, but suppose you are treating fissionable materials themselves. Suppose you take a huge company with a large research department. Any industry that goes in must be employed by the Commission. If my understanding of this is correct, employ means employ, and that means you must be hired and paid and controlled both as to discipline and duties by the Commission, which is impractical.

The CHAIRMAN. Well, I want to make sure that we understand one another. It is the intent of the bill, as you heard Mr. Folk and the committee discuss it, to make the manufacture of fissionable materials a Government monopoly in the field. It is not the intent of the bill to make a Government monopoly of the mining of the source materials.

Mr. BRANSOME. My only purpose in pointing out this particular wording, "employees of the Commission," is to indicate that it would require considerable exploration. Let me say this: I don't want to confuse you, but at any time we might go on, as a corporation—or other companies in our industry—into the fissionable material job, or go beyond just the source materials. We have research departments that are constantly doing that, so our interest is there.

The CHAIRMAN. Of course, that opens up a much wider field. As I said, I agree with you that the mining of the materials should not be a Government monopoly.

* * *

83D CONGRESS } HOUSE OF { REPORT
2d Session } REPRESENTATIVES { No. 2181

AMENDING THE ATOMIC ENERGY ACT OF 1946, AS AMENDED, AND FOR OTHER PURPOSES

JULY 12, 1954.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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Mr. COLE of New York, from the Joint Committee on Atomic Energy, submitted the following

REPORT

[To accompany H. R. 9757]

The Joint Committee on Atomic Energy, to whom was referred the bill (H. R. 9757) to amend the Atomic Energy Act of 1946, as amended, and for other purposes, having considered the same, unanimously report favorably thereon and recommend that the bill do pass. Some individual members of the Joint Committee hold divergent views on certain sections of the bill which are attached hereto or will be presented appropriately in their respective Houses.

This report describes the background of H. R. 9757, which is the committee-approved revision of H. R. 8862 on which public and executive hearings have been held, sets forth the basic considerations which impelled the Joint Committee to report it

favorably, and furnishes a section-by-section analysis of the bill.

CHANGING PERSPECTIVES IN ATOMIC ENERGY

The primary purpose of H. R. 9757 is to bring the Atomic Energy Act of 1946 into accord with atomic progress and to make our Nation's legislative controls better conform with the scientific, technical, economic, and political facts of atomic energy as they exist today—almost a decade after S. 1717 became the law of the land (Public Law 555, 79th Cong.).

The organic law was written at the very outset of the atomic era. Those who participated in drafting that law were keenly aware that many unknown factors were involved in measuring the future impact of this new source of energy upon our national life. Indeed, the law warned in its findings and declaration that "any legislation will necessarily be subject to revision from time to time." We deem it a tribute to the special committee which drafted S. 1717, 79th Congress, and to the late Senator Brien McMahon, sponsor of the legislation and subsequently chairman of the Joint Committee, that the organic law has served our Nation so well for nearly a full decade. We would also record our satisfaction with the fact that, at a time when atomic energy was popularly associated only with the atom bomb, the organic law specifically called attention to constructive uses of the atom, by declaring that—

subject at all times to the paramount objective of assuring the common defense and security, the

development and utilization of atomic energy shall, so far as practicable, be directed toward improving the public welfare, increasing the standard of living, strengthening free competition in private enterprise, and promoting world peace,

Under the Atomic Energy Act of 1946, our Nation has developed, in the form of our atomic-weapon stockpile, a degree of deterring power which may well constitute the free world's greatest material asset in its effort to avert another worldwide war. The elementary requirements of national security have compelled us to give military uses of the atom top priority. Yet we have simultaneously developed, to a considerable degree, beneficent applications of this new force.

The past 8 years have witnessed extraordinary scientific and technical achievements in atomic energy, both on the peacetime and military sides. Technological developments—some promising longer and richer lives for all privileged to share in the peacetime benefits of the atom, and others posing grave threats to the very existence of civilization—have proceeded much more rapidly than was expected in 1946. As a result, atomic-energy legislation which was once fully responsive to assuring the common defense and promoting the national welfare must now be revised to take account of existing realities in atomic energy, in our Nation and throughout the world.

When the original act was written, the United States possessed a monopoly of atomic weapons. In a world where just and lasting peace was fervently

sought though riot yet assured, simple prudence dictated stringent security regulations aimed at prolonging our monopoly. It was widely believed that the Soviet Union might not explode its first atomic bomb for many years to come, and that still more years might pass before it could produce atomic weapons in quantity. In point of fact, however, the Soviet Union broke our atomic monopoly less than 3 years after the Atomic Energy Act of 1946 was put on the statute books. In the fall of 1953, less than a year after our first full-scale fusion-weapon test, the Soviets also achieved a thermonuclear explosion. This clearly does not mean that the security regulations contained in the Atomic Energy Act of 1946 served no useful purpose, or that an indiscriminate relaxation of these safeguards is now in order. It does mean that our provisions for the control of information must now be 'revised to protect our national interest in a world where the forces of evil have added to their conventional arms a growing ability to launch a devastating atomic blow against the free world.

When the organic law was enacted, atomic bombs were regarded by most as strategic weapons. Tactical applications of the military atom were but dimly perceived. Still less was it recognized that the time would soon come when tactical atomic weapons could profoundly, perhaps even decisively, affect the operations of the ground forces defending Western Europe. With our Nation the sole possessor of atomic weapons, and with these weapons husbanded for a strategic counterblow against an aggressor, there was no need for

acquainting friendly nations with information concerning the effects and military employment of tactical atomic weapons. Today, however, we are engaged with our allies' in a common endeavor, involving common planning and combined forces to dam the tide of Red military power and prevent it from engulfing free Europe. America's preponderance in atomic weapons can offset the numerical superiority of the Communist forces, and serve emphatic notice on the Soviet dictators that any attempt to occupy free Europe, or to push further anywhere into the free world, would be foredoomed to failure. Yet, so long as our law prohibits us from giving our partners in these joint efforts for common defense such atomic information as is required for realistic military planning, our own national security suffers.

To contrast still further differences between the perspective of 1946 and that of 1954: It was commonly believed 8 years ago that the generation of useful power from atomic energy was a distant goal, a very distant goal. Atomic energy then was 95 percent for military purposes, with possibly 5 percent for peacetime uses. The resources of the Atomic Energy Commission and of its contractors appeared fully adequate to develop atomic-power reactors at a rate consistent with foreseeable technical progress. Moreover, there was little experience concerning the health hazards involved in operating atomic plants, and this fact was in itself a compelling argument for making the manufacture and use of atomic materials a Government monopoly.

Today, however, we can draw on the experience acquired in designing, building, and operating more than a score of atomic reactors. It is now evident that greater private participation in power development need not bring with it attendant hazards to the health and safety of the American people. Moreover, the atomic-reactor art has already reached the point where atomic power at prices competitive with electricity derived from conventional fuels is on the horizon, though not within our immediate reach. For more than 2 1/2 years, the experimental breeder reactor has actually been producing relatively small amounts of electricity at the national reactor testing station in Idaho. The land-based prototype of the atomic engine propelling the U. S. S. *Nautilus* has already produced more than enough power to send an atomic submarine around the world, fully submerged and at full speed. The Westinghouse Electric Corp. and the Duquesne Power & Light Co. are now constructing the Nation's first large-scale atomic-power reactor, which will generate 60,000 kilowatts of electricity—an amount sufficient to furnish light and power for a sizable city.

Many technological problems remain to be solved before widespread atomic power, at competitive prices, is a reality. It is clear to us that continued Government research and development, using Government funds, will be indispensable to a speedy and resolute attack on these problems. It is equally clear to us, however, that the goal of atomic power at competitive prices will be reached more quickly if private enterprise, using private funds, is now encouraged to play a far larger

role in the development of atomic power than is permitted under existing legislation. In particular, we do not believe that any developmental program carried out solely under governmental auspices, no matter how efficient it may be, can substitute for the cost-cutting and other incentives of free and competitive enterprise.

Today we are not alone in the drive to achieve peacetime atomic power. Eight years ago, besides the United States, only the United Kingdom, Canada, and—as we have recently come to find—the Soviet Union, had major atomic energy projects in being. The possibility of cooperating with other nations to gain mutual advantage in the area of peacetime power appeared far in the future. As against this, however, more than 20 countries now have vigorous atomic energy programs, and several of them are pressing toward the construction of atomic power plants to turn out useful amounts of electricity.

In 1946, finally, our Nation earnestly hoped that worldwide agreement on international control of atomic energy might soon be secured. It was reasonable, therefore, that the original act should prohibit an exchange of information on commercial uses of atomic energy with other nations until such time as the Congress declared that effective and enforcible international safeguards against the use of atomic energy for destructive purposes had been established.

But our hopes of 1946 have been thwarted by unremitting Soviet opposition to the United Nations plan

for the control of atomic energy. Although we would be morally derelict if we abandoned our hopes for the eventual effective international regulation of all armaments, legislative policy cannot now be founded on the expectation that the prospect of such control is either likely or imminent.

In summary: Statutory provisions which were in harmony with the state of atomic development in 1946 are no longer consistent with the realities of atomic energy in 1954. Legislation not responsive to the needs and problems of today can serve only to deny our Nation, and like-minded nations as well, the true promise of atomic energy—both in augmenting the total military strength of the free world, and in increasing opportunities for beneficent uses of the atom.

* * *

IN THE UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF VIRGINIA
DANVILLE DIVISION

VIRGINIA URANIUM, INC., *et al.*, Plaintiffs,	)	
v.	)	CIVIL ACTION NO. 4:15CV-31-JLK
TERRY McAULIFFE, *et al.*, Defendants.	)	

REPLY IN SUPPORT OF MOTION TO DISMISS AND RESPONSE TO CROSS-MOTION FOR SUMMARY JUDGMENT

* * *

E. Virginia may consider public health and safety in regulating uranium mining.

Since uranium mining lies beyond the jurisdiction of the NRC, it must be presumed that Congress intended the states to retain the ability to exercise the full scope of their traditional police powers in regulating uranium mining. Otherwise, the states would face a regulatory vacuum in which there would be no health and safety protection for their citizens. *See PG&E*, 461 U.S. at 207-08 ("[I]t is almost inconceivable that Congress would have left a regulatory vacuum; the only reasonable inference is that Congress intended the States to continue to make these judgments."). The Court need not conduct a searching review of

legislative motive;[7] regardless of what Virginia may have considered in either passing or declining to overturn[8] the current ban, the AEA does not reach uranium mining and the Commonwealth was entitled to exercise the entirety of its police powers[9] in making such a

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[7] The Defendants maintain that "it would be particularly pointless . . . to engage in such an inquiry here where it is clear that the States have been allowed to retain authority" over the subject of conventional uranium mining. *PG&E*, 461 U.S. at 216. Moreover, it is difficult to see how newspaper articles published thirty years after the enactment of Va. Code § 45.1-283 bear on the legal question of whether Congress somehow prevented the Commonwealth from doing so under the AEA. However, should the Court determine such an inquiry is appropriate, the Court should, pursuant to Fed. R. Civ. P. 56(d) and following the answers of the remaining Defendants, establish a period of discovery for the parties to assemble evidence on this issue.

[8] The Plaintiffs' reliance upon cases such as *Shelby Cnty v. Holder*, ___U.S. ___, 133 S. Ct. 2612 (2013) is misplaced. *Shelby County* does not render inquiry into recent legislative activities appropriate in this case. It involved remedial activities under the Voting Rights Act and whether or not conditions still existed warranting such remedial activities. *See id.* at 2618. The Plaintiffs' challenge to Va. Code § 45.1-283 does not hinge upon the current conditions of the uranium industry; rather, it is a *prima facie* legal challenge to the authority of Virginia to enact such a statute in the first place. The enactment did not become unconstitutional because of subsequent changes in the uranium industry; it was, in the Plaintiffs' construct, constitutionally defective at the moment of enactment. Therefore, the "unsatisfactory venture" of inquiring into legislative motive (if at all appropriate) must focus on the original passage of the statute, not any subsequent developments. *PG&E*, 461 U.S. at 216.

[9] As noted in the Defendants' original Motion, much of the evidence highlighted by the Plaintiffs speaks not to radiation or radiological issues, but general concerns about health, safety and welfare. *See, e.g., Plaintiffs' Motion* at 35 (Page ID#366) (noting that Va. Code § 45.1-283 was passed based upon the General

determination. *See Met. Life Ins. Co. v. Massachusetts*, 471 U.S. 724, 756 (1985) (noting states "have had great latitude under their police powers to legislate as to the protection of the lives, limbs, health, comfort, and quiet of all persons."). There is simply no "clear and manifest" direction to the contrary provided by the AEA. *PG&E*, 461 U.S. at 206 (citation omitted).

* * *

Assembly's "concern for 'the health, safety, and general welfare of the citizens of this Commonwealth.'") (quoting Senate Bill 179); *id.* at 17-18 (Page ID# 348-49) (quoting then-Senator Herring's concerns about the potential "public health impacts" of uranium mining); . These types of concerns lie at the heart of a state's police powers, highlighting the fact that any effort to supersede those by Congress must be done with "clear and manifest" intent. *PG&E*, 461 U.S. at 206 (citation omitted).

No. 16-1005

IN THE UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT

VIRGINIA URANIUM, INC.; COLES HILL, LLC; BOWEN MINERALS, LLC; VIRGINIA ENERGY RESOURCES, INC.,

Plaintiffs-Appellants,

v.

JOHN WARREN, in his official capacity as Director of the Virginia Department of Mines, Minerals and Energy, *et al.*,

Defendants-Appellees.

On Appeal from the United States District Court for the Western District of Virginia, the Hon. Jackson L. Kiser, presiding (4:15-cv-00031)

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April 18, 2016

* * *

[14] **F. Defendants move to dismiss under Rule 12(b)(6) and Appellants cross-move for summary judgment.**

Unsuccessful in their lobbying efforts, Appellants filed this lawsuit. They seek a declaratory judgment that the Atomic Energy Act preempts Virginia Code § 45.1-283, and an injunction compelling Virginia's permitting authorities "to ignore" the moratorium.[54]

Defendants moved to dismiss the complaint under Rule 12(b)(6), arguing that, as a matter of law, the 1954 Act does not address, let alone preempt,

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[54] JA 14.

conventional uranium mining on nonfederal lands.[55] In their response, Appellants included a cross-motion for summary judgment, attaching more than 700 pages of newspaper stories and other materials in an effort to show that Virginia enacted the uranium-mining moratorium and failed to repeal it, predominantly because of [15] radiological safety concerns.[56] Some of those materials showed concerns about uranium mining that were independent of concerns about radiation or about milling or tailings management.[57] All of those materials were beside the point, however, because Rule 12(b)(6) required defendants to accept as true that Virginia enacted the moratorium based on radiological safety concerns.[58]

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[55] Certain defendants, including the Governor of Virginia, also moved for dismissal under Rule 12(b)(1) on Eleventh Amendment grounds. The district court granted that motion (JA 900-02) and Appellants do not contest that ruling here.

[56] JA 143-866.

[57] *See, e.g.*, JA 70-71 (citing "safety of miners"); JA 654 (citing aesthetic, tourism, and economic concerns, and volatility of uranium market leading to business failure); JA 659 (citing "concerns that water sources could be threatened by mining or natural events"); JA 670 (citing concern about the "potential for taxpayers to get stuck with the bill if something goes wrong at the mine or the mining company goes out of business").

[58] Defendants did not (and do not) concede the truth of the hearsay in those newspaper articles and other materials. *See* Reply in Supp. of Mot. to Dismiss & Response to Cross-Mot. for Summ. J. at 2 (ECF No. 56) (noting plaintiffs' effort to show the moratorium's "purported purposes"). Unlike in the Eastern District of Virginia, no rule in the Western District required defendants to respond to every alleged statement of undisputed material fact in plaintiffs' brief. *Compare* E.D. Va. Local R. 56(B) *with* W.D.

One item Appellants included in the record below bears particular mention. Paragraphs 77-78 of the Complaint described a 2011 report by the National Academies of Sciences that was commissioned by the Uranium Subcommittee of [16] the Virginia Coal and Energy Commission.[59]Appellants selected more than 140 pages of that report to file in the district court.[60] But they omitted the pages explaining that "[t]here is no federal law that specifically applies to uranium mining on non-federally owned lands; state laws and regulations have jurisdiction over these mining activities."[61]

* * *

Va. Local R. 56(b). Defendants conceded the truth of plaintiffs' claims about legislative motive only for purposes of their Rule 12(b)(6) motion. Had defendants' motion to dismiss not been granted, the district judge would have had discretion to give defendants "an opportunity to properly . . . address the facts" asserted by plaintiffs. Fed. R. Civ. P. 56(e)(1).

[59] JA 36-37 (Compl. ¶¶ 76-78).

[60] Pls.' Ex. 3 (JA 203-349).

[61] *See* National Research Council, *Uranium Mining in Virginia: Scientific, Technical, Environmental, Human Health and Safety, and Regulatory Aspects of Uranium Mining and Processing in Virginia* 7 (2012), http://www.nap.edu/catalog/13266/uranium-mining-in-virginia-scientific-technical-environmental-human-health-and-safety-and-regulatory-aspects-of-uranium-mining-and-processing-in-virginia; *id.* at 233, 256 (same).

No. 16-1275

In The
Supreme Court of the United States

VIRGINIA URANIUM, INC., *et al.*,

Petitioners,

v.

JOHN WARREN, *et al.*,

Respondents.

On Writ Of Certiorari To The United States Court Of Appeals For The Fourth Circuit

BRIEF FOR PETITIONERS

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QUESTION PRESENTED

In *Pacific Gas & Electric Co. v. State Energy Resources Conservation & Development Commission* ("*PG&E*"), 461 U.S. 190, 212 (1983), this Court held that the Atomic Energy Act ("AEA") "has occupied the entire field of nuclear safety concerns," and a state law that is "grounded in [radiological] safety concerns falls squarely within the prohibited field." *Id.* at 213. Because the field preempted by the Act is "defined . . . , in part, by reference to the motivation behind the state law," *English v. General Electric Co.*, 496 U.S. 72 (1990), the lower courts have uniformly held that "a state cannot use its authority" over activities indisputably subject to State regulation as a pretextual "means of regulating radiological hazards" arising from activities regulated by the Nuclear Regulatory Commission pursuant to the AEA. *Skull Valley Band of Goshute Indians v. Nielson*, 376 F.3d 1223, 1247–48 (10th Cir. 2004). *Accord, e.g., Entergy Nuclear Vermont Yankee, LLC v. Shumlin*, 733 F.3d 393, 416 (2d Cir. 2013).

In contrast, a divided panel of the court below held that so long as a challenged law "does not [on its face] purport to regulate an activity within the [AEA]'s reach," courts may *not* "conduct a pretext analysis to ascertain [the] legislature's true motive." Pet.App.15a, 18a. Under the ruling below, courts may *not* "look past the statute's plain meaning to decipher whether the legislature was motivated" by radiological safety concerns. Pet.App.14a.

The question presented is:

Does the AEA preempt a state statute that on its face regulates an activity within the regulatory

QUESTION PRESENTED—Continued

jurisdiction of the States (here uranium mining), but has the purpose and effect of regulating the radiological safety hazards of activities within the jurisdiction of the Nuclear Regulatory Commission (here, the milling of uranium ore after it is mined and the management of the resulting uranium tailings)?

PARTIES TO THE PROCEEDING

Petitioners Virginia Uranium, Inc., Coles Hill, LLC, Bowen Minerals, LLC, and Virginia Energy Resources, Inc. were the plaintiffs before the District Court and the plaintiffs-appellants in the Court of Appeals.

Respondents John Warren, in his official capacity as Director of the Virginia Department of Mines, Minerals and Energy, Bradley C. Lambert, in his official capacity as Deputy Director of the Virginia Department of Mines, Minerals and Energy, and James P. Skorupa, in his official capacity as Director of the Virginia Department of Mines, Minerals and Energy's Division of Mineral Mining, were defendants before the District Court and defendants-appellees in the Court of Appeals. Conrad Spangler, the former Director of the Virginia Department of Mines, Minerals and Energy, was also initially docketed by the Court of Appeals as an appellee, but the current director, John Warren, was substituted in his place on January 5, 2016, pursuant to FED. R. APP. P. 43(c)(2).

CORPORATE DISCLOSURE STATEMENT

The disclosure statement in the Petition for Writ of Certiorari remains accurate.

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INTRODUCTION

Recognizing that atomic power can make a vital "contribution to the common defense and security and the national welfare," Congress has since the dawn of the atomic age provided that this unprecedented source of energy must be regulated "by the United States." 42 U.S.C. §§ 2012(e), 2013(c). To secure "the national interest," *id.* § 2012(d), Congress therefore carefully delineated the boundary lines between state and federal authority over nuclear materials. Under the Atomic Energy Act ("AEA"), "the federal government has occupied the entire field of nuclear safety concerns," *Pacific Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n* ("*PG&E*"), 461 U.S. 190, 212 (1983), while the States are left with authority "to regulate activities for *purposes other than* protection against radiation hazards," 42 U.S.C. § 2021(k) (emphasis added). This division of regulatory authority ensures that duplicative and conflicting requirements cannot prevent the nuclear industry from "mak[ing] the maximum contribution to the common defense and security and the national welfare." *Id.* §§ 2013(c), 2021(a)(3). And because Congress determined that the federal Nuclear Regulatory Commission ("NRC" or "Commission") "was more qualified" than State regulators "to determine what type of safety standards should be enacted in this complex area," *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 250 (1984), federal jurisdiction over radiological safety is also necessary "to protect the health and safety of the public," 42 U.S.C. § 2012(e).

The provision governing the preemptive scope of the AEA limits state authority based on *the purpose* for which States may act, not simply *the activities or materials* their laws may regulate. To eliminate any doubt about the regulatory domain denied to the States, Congress twice identified the prohibited purpose. Thus, while States may "regulate activities for purposes other than protection against radiation hazards," they *may not*, absent a specific agreement with the NRC, regulate "for the protection of the public health and safety from radiation hazards" entrusted to the care of the NRC. *Id.* § 2021(b), (k). As this Court has put the point, Congress has thus "defined the pre-empted field, in part, by reference to the motivation behind the state law." *English v. General Elec. Co.*, 496 U.S. 72, 84 (1990).

Accordingly, as the Court's landmark decision in *PG&E* makes clear, even where a State *purports* to take an action unquestionably within its sphere, it remains "necessary to determine [the] . . . rationale" for the law, and if it is "grounded in safety concerns" related to radiological materials within the exclusive jurisdiction of the NRC, then it "falls squarely within the prohibited field." 461 U.S. 212–13. For the last half-century, the atomic energy industry has grown and developed based upon this division of regulatory turf, with federal courts deploying the AEA's purpose-based preemption test to strike down state and local attempts to openly or surreptitiously regulate radiological safety based on localist concerns, not national interests. *See, e.g., Entergy Nuclear Vermont Yankee,*

LLC v. Shumlin, 733 F.3d 393, 416–20 (2d Cir. 2013); *Skull Valley Band of Goshute Indians v. Nielson*, 376 F.3d 1223, 1246–52 (10th Cir. 2004).

The approach adopted by the Fourth Circuit panel majority in this case upends this equilibrium. The Commonwealth of Virginia has banned the mining of the largest deposit of uranium in the United States. Although framed as a moratorium on uranium *mining*—an activity within Virginia's jurisdiction—there is no doubt, as Respondents and both courts below have conceded at this stage in the litigation, that the ban is motivated by concerns about the radiological safety of activities which lie within *the NRC*'s exclusive ambit: the milling of the ore that takes place after it is mined, and the storage of the waste rock, or "tailings," left behind. Because Virginia's ban is thus "grounded in [radiological] safety concerns" relating to activities that are within the jurisdiction of the NRC, it "falls squarely within the prohibited field," under the plain text of the AEA and this Court's unambiguous case law. So it cannot stand. *PG&E*, 461 U.S. at 213.

The panel majority below nevertheless upheld Virginia's uranium ban. In the teeth of Congress's instructions and this Court's teaching, the majority refused "to look past the statute's plain meaning to decipher whether the legislature was motivated" by radiological safety concerns relating to uranium milling and tailings storage, Pet.App.14a, even though the Commonwealth itself conceded this was in fact its purpose, Pet.App.29a (Traxler, J., dissenting). The panel majority reasoned that the inquiry into a state law's

"rationale" demanded by the AEA is only necessary when "a state *purports* to regulate an activity that is also regulated by the Act." Pet.App.9a (emphasis added). And because Virginia *purported* to ban only uranium mining, the majority refused to undertake "a pretext analysis to ascertain [the] legislature's true motive." Pet.App.15a.

The majority's approach is irreconcilable with the plain language of the AEA and this Court's precedent. It is in the *very nature* of an inquiry into a state law's purpose that the inquiry must go forward even if *the face of the law disclaims the impermissible purpose*. The literacy tests of the Jim Crow South were not insulated from scrutiny because they did not *purport* to limit the right to vote based on race. By establishing a preemption standard based on "the motivation behind the state law," *English*, 496 U.S. at 84, Congress has thus instructed the courts to determine whether a State's purpose—its *true* purpose—is "to regulate the materials" entrusted to the NRC's care "for the protection of the public health and safety from radiation hazards" *even if* the State's law *purports* to govern materials and activities left within its own jurisdiction. 42 U.S.C. § 2021(b). "[A] state cannot use its authority" over non-preempted matters "as a means of regulating radiological hazards." *Skull Valley*, 376 F.3d at 1248.

The Fourth Circuit's refusal to "conduct a pretext analysis," Pet.App.15a—in a case where *the pretext is admitted*—amounts to nothing less than a nullification of the AEA's core purposes of promoting atomic energy and ensuring that matters of radiological safety are

left to the care of the NRC. The approach adopted below is effectively a guidebook for every state or local official wishing to frustrate the development of atomic energy—based on local, not national, interests—explaining how they may ban nuclear development while circumventing the AEA's preempted field. This Court should reverse the decision below and reaffirm that when a State law is "grounded in safety concerns" that Congress entrusted to the NRC, it "falls squarely within the prohibited field." *PG&E*, 461 U.S. at 213.

OPINIONS BELOW

The panel opinion of the Court of Appeals is reported at 848 F.3d 590 and reproduced in the Appendix to the Petition for Writ of Certiorari at Pet.App.1a. The order of the District Court granting Respondents' motion to dismiss is reported at 147 F. Supp. 3d 462 and reproduced at Pet.App.53a.

JURISDICTION

The Court of Appeals entered judgment on February 17, 2017. The petition for writ of certiorari was filed on April 21, 2017, and granted on May 21, 2018. This Court has jurisdiction under 28 U.S.C. § 1254(1).

CONSTITUTIONAL PROVISIONS AND STATUTES INVOLVED

The relevant portions of Article VI of the United States Constitution; Atomic Energy Act, Title 42, Chapter 23 of the United States Code; Title 10, Part 40 of the Code of Federal Regulations; Title 45.1 of the Virginia Code; and the Acts of the General Assembly of the Commonwealth of Virginia are reproduced at Pet.App.83a.

STATEMENT

I. Domestic Production and Use of Uranium and the Coles Hill Deposit

1. Uranium is used primarily for the commercial and military production of atomic energy, making it a critically important natural resource. At the outset of the atomic age, Congress recognized "the benefits of peaceful applications of atomic energy," and thus acted "to encourage widespread participation in the development and utilization of atomic energy for peaceful purposes." 42 U.S.C. § 2013(d), (e). Under the federal superintendence that Congress established in 1954, as interpreted by this Court in the *PG&E* case, nuclear reactors powered by uranium have come to generate nearly 20 percent of the electricity consumed in the

United States—all without significant production of greenhouse gases. Compl., Pet.App.202a.[1]

Uranium is also critical to national security. It is a necessary ingredient, of course, in our arsenal of nuclear weapons. Pet.App.4a. And it also powers our Nation's fleet of over 80 nuclear submarines and aircraft carriers. Pet.App.397a. As the United States has emphasized in briefing before this Court, uranium is necessary to "the United States' ability to produce materials critical to military operations," and ensuring its domestic supply is "a matter of compelling importance to U.S. national security interests." Petition for Writ of Certiorari at 30, 31, *United States v. Eurodif, S.A.*, No. 07-1059 (Feb. 2008), Pet.App.347a, 349a.

Ninety-four percent of the uranium used to supply the Nation's atomic energy needs is imported. Pet.App.352a. Even more troubling, 17 percent of those imports come from Russia, and another 22 percent come from Russia-allied states Kazakhstan and Uzbekistan. Pet.App.353a. The United States thus relies on *its geopolitical rivals* to supply nearly 40 percent of its need for this critical resource—and we rely on other foreign sources for the great bulk of the remainder.

Accordingly, the political branches have repeatedly emphasized the United States' acute economic and strategic interest in securing a domestic supply of

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[1] Because this case was resolved on a motion to dismiss, the allegations in Petitioners' complaint must be accepted as true for purposes of this Court's review. *Hernandez v. Mesa*, 137 S. Ct. 2003, 2005 (2017).

uranium. For instance, federal legislation gives the Secretary of Energy "a continuing responsibility for the domestic uranium industry to encourage the use of domestic uranium," in furtherance of "the national need to avoid dependence on imports" of the material. 42 U.S.C. §§ 2296b-3(a), 2296b-6(a). The Department of the Interior recently recognized uranium as a "critical mineral" that is "vital to the Nation's security and economic prosperity," emphasizing that our dependency on foreign sources for the material "creates a strategic vulnerability for both its economy and military." Final List of Critical Minerals 2018, 83 Fed. Reg. 23,295 (May 18, 2018). And numerous members of Congress have repeatedly stressed that establishing a domestic source of uranium—and curbing our reliance on Russian-controlled sources—is a critical national security imperative. *See, e.g.*, Pet.App.381a (Statement of Sen. Portman); *see also* Brief of Senator Tom Cotton *et al.* as *Amici Curiae* in Support of Petitioners at 14–20 (May 25, 2017).

2. Petitioners own a deposit of approximately 119 million pounds of uranium ore that lies below the Coles Hill estate in Pittsylvania County, Virginia. Compl., Pet.App.201a. It is the largest natural deposit of uranium in the United States and one of the largest in the world, and its energy-generating potential is enormous. *Id.* The development of this massive resource would also be economically advantageous for the region on a vast scale, leading to the creation of an estimated 1,052 annual jobs and nearly $5 billion of net revenue for local businesses. Compl., Pet.App.202a.

Conventional uranium mining involves three basic processes: mining, milling, and tailings management. First, the raw ore that contains the uranium must be extracted from the ground. Compl., Pet.App.203a. Second, the uranium ore must then be milled, or processed into usable form. *Id.* A uranium mill grinds the uranium ore into a sand, which is then run through either an acidic or alkaline solution to separate the uranium from the waste rock commonly known as "tailings." *Id.* The uranium is then concentrated and dried into "yellowcake," which is commercially sold and shipped off-site for enrichment. *Id.* Finally, the tailings, which remain radioactive, must be permanently stored in a secure tailings management facility.

Like any other human activity, uranium development is not risk-free. But numerous studies have concluded that if done in accordance with modern mining techniques and in compliance with the rigorous health and safety regulations promulgated by the Commission, the risk posed by uranium development is negligible. For example, an independent study of the radiological risks involved in developing the Coles Hill deposit concluded that if the uranium were developed according to best practices, the *most-exposed* resident of the area surrounding the operation would be exposed to only an additional 7.8 millirems of radiation annually. J.A.114. That amounts to a tiny fraction of the 620 millirems of radiation the average American is exposed to each year. Compl., Pet.App.205a. Indeed, a typical adult is exposed to nearly 7.8 additional

millirems each time they take a round-trip, coast-to-coast airplane flight. *Radiation from Air Travel*, CENTERS FOR DISEASE CONTROL (Mar. 2, 2016), http://goo.gl/IVsR76. And because of background variations in radiation, the average Virginia resident would be exposed to over *twenty-seven times* this amount annually merely by moving across the border to Maryland. *See* John Mauro & Nicole M. Briggs, *Assessment of Variations in Radiation Exposure in the United States*, U.S. ENVTL. PROT. AGENCY at 4 tbl.1 (July 15, 2005), https://goo.gl/kgXiun (average background radiation level in Maryland 215 millirems/year higher than in Virginia).

II. The Scope of Federal Authority over Atomic Energy

1. Shortly after the Manhattan Project first succeeded in detonating an atomic bomb, Congress enacted the AEA to provide for federal regulation of the new source of energy. The initial version of the Act, passed in 1946, made "the use, control and ownership of nuclear technology . . . a federal monopoly." *PG&E*, 461 U.S. at 206; *see* Atomic Energy Act of 1946, Pub. L. No. 79-585, 60 Stat. 755. Over the next several years, however, it became apparent that "the national interest would be best served if the Government encouraged the private sector to become involved in the development of atomic energy for peaceful purposes under a program of federal regulation and licensing." *PG&E*, 461 U.S. at 207.

In 1954, therefore, Congress amended the AEA to end the federal monopoly on the production and use of atomic power, instead "providing for licensing of private construction, ownership, and operation of commercial nuclear power reactors" and other facilities. *Id.* And because Congress determined that the federal NRC "was more qualified to determine what type of safety standards should be enacted in this complex area" than the States, it also vested the NRC with exclusive authority to establish regulatory limits and controls necessary to protect the public health and safety. *Silkwood*, 464 U.S. at 250.[2]

The NRC establishes and enforces these regulatory limits and controls primarily through the use of its licensing authority. The AEA requires that anyone who wishes to "transfer or receive in interstate commerce, manufacture, produce, transfer, acquire, own, possess, import, or export" any radioactive "byproduct material"—specifically defined to include "the tailings or wastes produced by the extraction or concentration of uranium"—must first receive a license from the NRC. 42 U.S.C. §§ 2014(e)(2), 2111(a)–(b). Because uranium milling and tailings storage—the second and third stages of uranium development discussed above—involve, *inter alia*, the "produc[ing]" and "possess[ing]" of byproduct material, both processes are

[2] Prior to the 1970s, the licensing and public health and safety regulatory functions of the NRC were carried out by its predecessor, the Atomic Energy Commission. *See Huffman v. Western Nuclear, Inc.*, 486 U.S. 663, 666 n.4 (1988). For ease of reference, we refer to the agency as the NRC or the Commission without regard to this change.

exclusively regulated by the NRC, *id.* § 2111(a). Respondents have never disputed that the States may not directly regulate those activities.

The Act also requires an NRC license for the transfer, delivery, or possession of "source material," which is defined to include uranium. *Id.* § 2014(z). But because this license is only required for uranium "after removal from its place of deposit in nature," *id.* § 2092, the Commission determined early on that its licensing authority does not extend to conventional uranium mining.[3] Congress chose not to regulate uranium mining itself because it concluded that (i) ordinary mining itself does not pose serious radiological hazards; and (ii) regulation of uranium mining would undermine Congress's policy of encouraging the development of atomic energy by discouraging uranium mining and prospecting. S. REP. NO. 79-1211, at 18 (1946), Pet.App.373a; *see also Atomic Energy: Hearings on H.R. 4280 Before the H. Comm. on Military Affairs*, 79th Cong. 125 (1945), Pet.App.376a.

2. While it has limited authority over the first stage of uranium production, the NRC has plenary, exclusive jurisdiction over the second and third stages—milling and tailings storage. And the Commission has exercised this exclusive jurisdiction to establish and implement detailed and extensive regulations

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[3] The NRC does, however, exercise exclusive jurisdiction over the modern "in situ" technique of uranium mining, which involves pumping chemicals into a uranium deposit to dissolve and separate the uranium from the surrounding ore underground. J.A.71–72.

governing the design, construction, and operation of uranium mills and tailings management facilities. 10 C.F.R. Pt. 40, App. A. In particular, the NRC's regulations go to great lengths to ensure that tailings are permanently stored in a manner that protects the public health and safety from radiological hazards.

The NRC's regulations govern, first, *where* a tailings management facility may be constructed. Tailings facility sites must ensure the "permanent isolation of tailings and associated contaminants by minimizing disturbance and dispersion by natural forces, and . . . without ongoing maintenance." *Id.* Once a site is chosen, the Commission requires that a tailings disposal facility either be placed below grade "in mines or specially excavated pits," or in an above-grade facility that is designed to "provide reasonably equivalent isolation of the tailings from natural erosional forces." *Id.*

The NRC also regulates the design and manufacture of the liner that must be placed at the bottom of the tailings storage facility. The liner must be "designed, constructed, and installed to prevent any migration of wastes out of the impoundment to the adjacent subsurface soil, groundwater, or surface water," and must be "[c]onstructed of materials that have appropriate chemical properties and sufficient strength and thickness." *Id.* And the Commission also regulates the design and construction of the cap or cover that is placed over the tailings storage cell once operations are complete; it must be made out of earth or an approved alternative and must be engineered so as to provide "reasonable assurance" that it will control the release

of radon gas and other radioactive materials within strict, specified limits "for 1,000 years, to the extent reasonably achievable." *Id.*

3. Because of confusion over the precise dividing line between federal and state authority over nuclear matters, in 1959 Congress again amended the AEA, to "clarify the respective responsibilities . . . of the States and the Commission with respect to the regulation of byproduct, source, and special nuclear materials." Act to Amend the Atomic Energy Act of 1954, Pub. L. No. 86-373, 73 Stat. 688 (1959) (codified at 42 U.S.C. § 2021(a)(1)). That amendment provided a narrow path through which States may assume limited regulatory authority under the watchful eye of the NRC. The Commission may "enter into agreements with the Governor of any State" to transfer to that State the NRC's regulatory jurisdiction over uranium milling and tailings management, 42 U.S.C. § 2021(b), but only if the NRC first ensures that the state program satisfies certain requirements, *id.* § 2021(d)(2). Once such an agreement is finalized, "the State shall have authority to regulate the materials covered by the agreement for the protection of the public health and safety from radiation hazards"—but only for "the duration of such an agreement." *Id.* § 2021(b). Unless such an agreement is in place, a State may regulate only "for *purposes other than protection against radiation hazards.*" *Id.* § 2021(k) (emphasis added).

Although Virginia has entered a Section 2021 agreement with the NRC, that agreement explicitly

does *not* cover uranium milling or tailings management. Pet.App.298a, 301a.

III. Virginia's Ban on Uranium Mining

Since shortly after the Coles Hill uranium deposit was discovered in the late 1970s, Virginia has flatly banned the mining of any uranium within its borders:

> Notwithstanding any other provision of law, permit applications for uranium mining shall not be accepted by any agency of the Commonwealth prior to July 1, 1984, and until a program for permitting uranium mining is established by statute.

VA. CODE § 45.1-283.

Virginia enacted this ban as a temporary moratorium on uranium mining in 1982 and then extended it into an indefinite ban through a series of steps throughout the early-to-mid 1980s. The Commonwealth then reconsidered the ban during the period from 2008 to 2013 but ultimately declined to lift it. And although Section 45.1-283 is literally phrased as a ban on "uranium mining," *id.*, as the case comes to this Court, Virginia has admitted that the mining ban was and is motivated by radiological safety concerns related to uranium milling and tailings management activities. Through its ban, Virginia has thus attempted to do *pretextually* what it admits it may not do directly: ban uranium milling and the storage of uranium tailings in the State in order to assuage local radiological safety concerns.

1. Virginia first moved to regulate uranium in 1981, shortly after uranium was discovered at Coles Hill. In the 1981 session, the General Assembly passed a resolution calling for the creation of a Uranium Subcommittee tasked with "evaluat[ing] the environmental effects of uranium exploration, mining and milling . . . and any possible detriments to the health, safety, and welfare of Virginia citizens which may result from uranium exploration, mining or milling." Act of Feb. 20, 1981, H.J. Res. 324, 1981 Va. Acts 1404, Pet.App.170a. Based on the Subcommittee's recommendation, in 1982 the Assembly imposed a "moratorium" on mining uranium until July 1, 1983, to give the Commonwealth an opportunity for further study. Act of Apr. 7, 1982, ch. 269, 1982 Va. Acts 426, 427, Pet.App.176a.

In 1983, the General Assembly extended the moratorium "until a program for permitting uranium mining is established by statute"—the current form of the ban. Act of Feb. 24, 1983, ch. 3, 1983 Va. Acts 3, Pet.App.177a–78a. It simultaneously created a second entity, the Uranium Administrative Group ("UAG"), tasked with conducting a more in-depth "evaluation of the costs and benefits" of uranium development. *Id.*, Pet.App.178a.

The General Assembly's overriding concern with the radiological hazards arising from milling and tailings management operations is evident on the face of this 1983 Act. The General Assembly directed the UAG specifically to examine a number of potential radiological safety concerns arising out of milling and tailings management activities, including the "capacity of the

mill" that was to be used to process the ore, the "quantity and quality of liquid and solid wastes," "the quantity and characteristics of the tailings," the "method of disposal," and the potential "atmospheric releases and the methods for controlling such releases." *Id.*, Pet.App.184a–85a. The General Assembly specified the milling- and tailings-related issues the UAG was to study in the most granular detail possible—from the "reagents and processing materials to be used" in milling operations to the "size of the tailings disposal area" and its "hydrology, hydrogeology, and surficial and bedrock geology." *Id.*, Pet.App.185a.

After two years of studying the radiological safety concerns related to milling and tailings storage in detail, the UAG issued a final report recommending that the ban be lifted. J.A.124. The UAG Report was supported by 16 of the 18 members of the group, but dissents were filed by Elizabeth H. Haskell and Frank E. Wallwork. Both dissents confirm that the opposition to uranium mining focused almost exclusively on the radiological safety concerns raised by tailings management operations.

Ms. Haskell based her opposition to permitting mining on "[t]he risks of cancer deaths and illnesses from radiation released from the uranium ore and waste products called tailings." J.A.142. In particular, she maintained that because Virginia has a "climate where rainfall exceeds evaporation," the risk that water that "is discharged from the site and filters through tailings" might be transmitted "to people through streams and the groundwater is a major issue." *Id.* Ms.

Haskell also worried about the potential for "long-term deterioration or collapse of the 100 foot high tailings pile by flood, earthquake, erosion or design failure for the thousands of years the tailings are radioactive." J.A.143. Mr. Wallwork likewise objected to the recommendation to permit mining based on his belief, contrary to the judgment of the NRC, that "[t]he technology to prevent seepage of radionuclides, heavy metals, or chemicals from the tailings area into the ground water has not been developed." J.A.149.

The General Assembly ultimately followed the recommendation of the two dissenters and declined to lift the moratorium.

2. For the next twenty years, plans to develop the Coles Hill deposit were not pursued because uranium prices had fallen steeply. The price of uranium finally rebounded in the mid-2000s, and Petitioner Virginia Uranium, Inc., was formed and began to engage the political process, urging lawmakers to reconsider the ban on uranium mining.

In 2008, the General Assembly formally began reconsideration of its ban on uranium development. After several State-sponsored studies, a bill was introduced in 2013 that would have lifted the ban and allowed uranium development, subject to stringent regulation. As in the 1980s, however, the opponents of uranium development succeeded in keeping the ban in place. And once again, Virginia's refusal to permit uranium mining was grounded squarely in radiological

safety concerns related to milling and, primarily, tailings management.

There can be no question that the Virginia State legislators who supported the continued enforcement of the ban were motivated by radiological safety concerns, primarily fears that mill tailings would contaminate the downstream drinking water supply relied upon by the Hampton Roads and Southside Virginia parts of the State. Indeed, the uncontradicted record evidence in the district court indicates that of the 31 members of the General Assembly who expressed their opposition to lifting the ban in statements in the public record, *every single one* cited radiological health and safety concerns, and *all but two* of them referenced fears that uranium tailings would contaminate the groundwater. *See* Pet.App.239a–97a. Although the ban literally covers only "uranium mining," these legislators understood and treated it as a ban on *the storage of uranium tailings*—something Respondents admit Virginia could not impose directly.

Ultimately, the argument that the tailings left over from uranium mining would expose Hampton Roads and Southside Virginia residents to radioactive water proved dispositive. At the end of January 2013, the bill designed to lift the ban was withdrawn.

IV. The Proceedings Below

1. Petitioners filed suit in the Western District of Virginia, alleging that the Commonwealth's ban is preempted by the federal Atomic Energy Act.

Petitioners sought a declaration to that effect and an injunction prohibiting continued enforcement of the ban.

Respondents moved to dismiss the complaint for failure to state a claim upon which relief could be granted. The Commonwealth acknowledged that the AEA gives the federal NRC exclusive regulatory jurisdiction over the radiological safety of the milling of uranium ore and the management of the resulting tailings. Nevertheless, Respondents argued that federal law does not in any way limit the State's authority to regulate uranium mining itself—even if it is clear beyond doubt that Virginia was regulating mining as an *admitted pretext* for regulating milling and tailings operations on the basis of radiological safety concerns. Petitioners cross-moved for summary judgment, arguing that both the text of the AEA and this Court's decision in *PG&E* compel the conclusion that Virginia's uranium mining ban is within the AEA's preempted field, given its admitted purpose. Petitioners also argued that the uranium ban is independently preempted as an obstacle to the AEA's purpose and objective of encouraging uranium development.

The district court granted Respondents' motion to dismiss and denied Petitioners' cross-motion for summary judgment. Pet.App.53a. The court held that Virginia's ban on uranium mining was not preempted because "[t]he AEA institutes no permitting regime respecting nonfederal uranium deposits' conventional mining and does not otherwise regulate nonfederal uranium deposits or their conventional

mining." Pet.App.68a. The court deemed it entirely irrelevant that "the General Assembly enacted [the uranium mining ban] out of concern for uranium (and, therefore, radiological) safety," Pet.App.69a, because the Commonwealth "asserted the right to act," as a formal matter, only on an "activity or material"—uranium mining—over which "the AEA is silent and confers no authority." Pet.App.78a.

The court held that "there is no occasion to inquire into [the ban's] purpose." *Id.* *PG&E*'s clear statements to the contrary, the court concluded, were nonbinding dicta that the court was free to ignore. "Rather than . . . extrapolating *Pacific Gas & Electric Co.*'s dicta and selecting among the opinion's (at times) seemingly-inconsistent language, this Court will adhere to the surer conclusion by scrutinizing the statutes uniquely before it and addressing their interaction under intelligible and longstanding principles of preemption." Pet.App.79a (footnote omitted).

2. A divided panel of the Fourth Circuit affirmed. Pet.App.1a–20a. The panel majority acknowledged that Section 2021(k) of the AEA, as construed by this Court in *PG&E*, "prohibits states from regulating, for [radiological] safety reasons, activities that are in any way regulated by the federal government under the Atomic Energy Act." Pet.App.11a (quotation marks omitted). And the majority further conceded that "uranium milling and tailings storage are 'activities' under Section 2021(k) because they are regulated by the NRC," and that "states may therefore not regulate them except for purposes other than protection against

radiation hazards." Pet.App.13a–14a.[4] Moreover, the majority accepted the Commonwealth's concession (at least for purposes of the motion to dismiss) that the purpose and effect of the ban on uranium mining was to prohibit uranium milling and tailings storage activities based on radiological safety concerns. Pet.App.10a ("the Commonwealth concedes that it lacks a non-safety rationale for banning uranium mining").

Nevertheless, the majority held that it need not inquire into the purpose of Virginia's mining ban. Pet.App.14a–15a. Observing that "[t]here are some areas of law—such as actions arising under the Equal Protection Clause of the Fourteenth Amendment" where "we may conduct a pretext analysis to ascertain a legislature's true motive," the court reasoned that "this is not such a case" because Petitioners have "not allege[d] that the Virginia legislature acted with discriminatory intent. . . ." Pet.App.15a. Accordingly, because the Commonwealth's statute facially bans only the mining of uranium and "does not mention uranium milling or tailings storage," the majority declined "to look past the statute's plain meaning to decipher whether the legislature was motivated to pass the ban

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[4] The majority also addressed whether "uranium mining" itself, as opposed to milling and tailings storage, "is an 'activity' under Section 2021(k) of the Atomic Energy Act, which . . . states can't regulate . . . for the purpose of protecting against radiation hazards," Pet.App.8a, but Petitioners have not sought review of that question, and it is beyond the scope of the Question Presented.

by a desire to regulate uranium milling [and] tailings." Pet.App.14a.

The majority declined to "follow the paths forged by our sister circuits in *Skull Valley* . . . and *Entergy*," Pet.App.16a—two cases which directly repudiated the proposition that a court may "blindly accept the articulated purpose of a state statute," *Entergy*, 733 F.3d at 416 (brackets omitted), and permit a State to use its authority over activities left within its jurisdiction "as a means of regulating radiological hazards," *Skull Valley*, 376 F.3d at 1248. Those cases, the majority asserted, involved state laws that expressly "targeted" activities within the NRC's exclusive jurisdiction and "specifically mentioned [these] NRC-regulated activit[ies]," while Virginia's uranium ban "does not purport to regulate an activity within the Act's reach, and thus we need proceed no further." Pet.App.16a, 18a.

Finally, the majority also concluded that the Commonwealth's ban was not preempted "as an obstacle to the full implementation of the objectives of the Atomic Energy Act." Pet.App.18a, 19a. Because "over ninety percent of the uranium used by the country's atomic energy industry is imported," and in any event, the AEA "allows the federal government to forcibly expand the production of domestic source material" by taking, through eminent domain, any "real property containing deposits" of uranium, the majority concluded that Virginia's ban did not "materially affect[ ]" the AEA's objective. Pet.App.19a.

Judge Traxler dissented. This Court's opinions in *PG&E* and *English*, he explained, "make[] clear that the AEA preempts state statutes enacted for the purpose of protecting against the radiological dangers of activities the AEA regulates." Pet.App.52a (Traxler, J., dissenting). And "[b]ecause the Commonwealth has conceded at this point in the litigation that its statute was enacted for just that purpose, the Virginia statute clearly falls within that prohibited field." *Id.* Indeed, Judge Traxler noted that "[u]ntil today, each Court of Appeals addressing the issue since *Pacific Gas* has held that state statutes enacted to protect against the radiological dangers of activities the AEA regulates are preempted *regardless of whether the statutory text reveals that purpose and regardless of whether the statute expressly prohibits an activity the Act regulates.*" Pet.App.42a. Virginia's ban falls within the AEA's preempted field, Judge Traxler concluded, under "the very same principles." Pet.App.47a.

Finally, Judge Traxler also would have held that the Commonwealth's ban is preempted as an obstacle to the AEA's purposes and objectives, since the challenged law "*prevent[s] the involvement of the very private-sector forces that the Act was designed to unleash.*" Pet.App.48a.

3. Both rulings below are thus predicated on the assumption that Virginia's uranium ban is motivated by radiological safety concerns related to milling and tailings management. The courts below have made that assumption because Respondents have *conceded* for purposes of the underlying motion to dismiss that

Virginia's ban is grounded in these concerns. In the District Court, Respondents accepted as true the lengthy and detailed allegations in Petitioners' complaint about the uranium ban's purpose, "[a]ssuming for purposes of" their motion to dismiss that "one of the purposes behind enacting § 45.1-283 was to address potential radiological safety concerns." J.A.43–44 (footnotes omitted); *see also* J.A.211–13. And before the Fourth Circuit, Respondents doubled down on that concession, arguing that the nearly 700 pages of evidence Petitioners introduced below showing the uranium ban's true motivation was "beside the point, . . . because Rule 12(b)(6) *required defendants to accept as true that Virginia enacted the moratorium based on radiological safety concerns*." J.A.216 (emphasis added). In short, as the case comes to this Court, it is undisputed that the purpose and effect of the uranium mining ban is to prohibit milling and tailings management operations based on the Commonwealth's disagreement with the NRC's judgment that such activities, when properly licensed and regulated, do not pose a radiological danger to public health and safety.[5]

4. On April 21, 2017, Petitioners petitioned this Court for a writ of certiorari. This Court requested the Solicitor General to file a brief giving the views of the United States, and on April 9, 2018, the United States

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[5] In Petitioners' view, Respondents have forfeited any argument that the uranium ban has any other purpose by failing to present any evidence or legal argument on the point in response to Petitioners' cross-motion for summary judgment. But this Court need not resolve that issue as the courts below have not addressed it.

filed a brief urging the Court to grant the writ. On May 21, the Court granted certiorari to determine whether "the AEA preempt[s] a state law that on its face regulates an activity within its jurisdiction . . . , but has the purpose and effect of regulating the radiological safety hazards of activities entrusted to the NRC." Pet.i.

SUMMARY OF THE ARGUMENT

I. The text of the AEA and this Court's precedents establish that the field preempted by the Act is "defined . . . , in part, by reference to the motivation behind the state law" that is allegedly preempted. *English*, 496 U.S. at 84. Section 2021 of the AEA was enacted "to clarify the respective responsibilities under [the AEA] of the States and the Commission," 42 U.S.C. § 2021(a)(1), and that provision thus governs the scope of preemption under the Act. Section 2021 provides that if a State obtains the NRC's consent to assume jurisdiction over certain radiological materials, the State acquires "authority to regulate the materials covered by the agreement for the protection of the public health and safety from radiation hazards." *Id.* § 2021(b).

But where—as here—no such agreement applies, the State has authority only "to regulate activities for *purposes other than* protection against radiation hazards." *Id.* § 2021(k) (emphasis added). Accordingly, as this Court held in *PG&E*, "the federal government has occupied the entire field of nuclear safety concerns,"

and where a State enacts a law "grounded in safety concerns" without first obtaining the NRC's permission under Section 2021, such a law "falls squarely within the prohibited field." 461 U.S. at 212–13.

II. While Virginia's uranium ban ostensibly prohibits only the *mining* of uranium, an activity the NRC does not regulate, Respondents concede at this stage in the case that the ban was enacted and maintained for the purpose of assuaging local concerns about the radiological safety of the subsequent *milling* of uranium ore and the management of its *tailings*—matters that, they also concede, fall within the NRC's exclusive jurisdiction. That should have been sufficient to end this case. But the panel majority below upheld the ban, reasoning that it need not even *look* at the purpose behind Virginia's ban, solely because the Commonwealth's law *purported* to be regulating an activity over which it retained control. That proposition cannot be squared with this Court's precedents or with the AEA itself.

The central import of Section 2021 is that the preemption inquiry must turn not just on *the activity* a State purports to regulate, but also on *the purpose* that motivates the regulation and the effect the State's regulation has on activities that Congress has entrusted exclusively to the NRC. And the lesson of *PG&E* is that under Section 2021's purpose inquiry, *even if* a State *claims* to be exercising authority that the AEA leaves in its hands, the courts must determine whether the challenged state law is instead actually "grounded in [radiological] safety concerns" that

Congress entrusted exclusively to the NRC. *PG&E*, 461 U.S. at 213.

III. The approach to preemption adopted below would stultify the AEA's core purpose of encouraging the development of atomic energy. State and local governments routinely seek to block nuclear development, prioritizing localist concerns over the national interest. Accordingly, following *PG&E* the federal courts have applied Section 2021's preemption framework time and again to strike down attempted interference with the atomic energy industry. The field-preemption analysis adopted by the panel majority demolishes Section 2021's framework at its foundations, enabling state and local governments to freely block nuclear development so long as they write their bans, restrictions, and moratoriums with sufficient care to formally maintain the pretext.

IV. Virginia's ban is also preempted as an obstacle to the accomplishment of the AEA's purposes and objectives. The federal statute, and the NRC regulations implementing it, are designed to maintain a delicate balance between "the promotion of nuclear power," *PG&E*, 461 U.S. at 221, and the radiological health and safety concerns posed by the materials used to produce that power. Virginia, by banning uranium mining altogether based on a judgment about the radiological safety of milling and tailings management that *directly contradicts* the NRC's own judgment has "upset the careful balance struck by Congress." *Edgar v. MITE Corp.*, 457 U.S. 624, 634 (1982). Moreover, Virginia has effectively regulated milling-and-tailings-related materials and activities

without first obtaining the agreement of the NRC to take over these portions of its jurisdiction as required by Section 2021, it thereby frustrates that important aspect of the AEA as well. *See Gade v. Nat'l Solid Wastes Mgmt. Ass'n*, 505 U.S. 88, 98–101 (1992).

ARGUMENT

In 1954, Congress declared that "the policy of the United States" is to direct "the development, use, and control of atomic energy . . . so as to promote world peace, improve the general welfare, increase the standard of living, and strengthen free competition in private enterprise." 42 U.S.C. § 2011(b). Accordingly, atomic energy and the "source materials" such as uranium used to produce it "must be regulated in the national interest and in order to provide for the common defense and security and to protect the health and safety of the public." *Id.* § 2012(d). To that end, Congress created an expert federal agency, the Nuclear Regulatory Commission, with power to "establish by rule, regulation, or order, such standards and instructions to govern the possession and use" of these materials "as [it] may deem necessary or desirable to promote the common defense and security or to protect health or to minimize danger to life or property." *Id.* § 2201(b).

By these actions, as this Court held in its foundational *PG&E* decision, the federal government "occupied the entire field of nuclear safety concerns." 461

U.S. at 212. And the text of the Atomic Energy Act itself establishes the boundary lines of this preempted field: while state and local governments may continue "to regulate activities for purposes other than protection against radiation hazards," they *may not*, absent an agreement approved by the NRC, regulate those materials and activities entrusted to the Commission "for the protection of the public health and safety from radiation hazards." 42 U.S.C. § 2021(b), (k).

The Supremacy Clause makes this determination "the supreme Law of the Land." U.S. CONST. art. VI, § 2. Under ordinary principles of preemption, by occupying this field Congress has "left no room for the States to supplement it." *Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218, 230 (1947). As the Court held in *PG&E*, a State law "grounded in safety concerns falls squarely within the prohibited field," and is thus preempted. 461 U.S. at 213. And where such a State law also bans, based on impermissible radiological safety reasons, the very activities that the NRC permits, it is "in the teeth of the Atomic Energy Act's objective to insure that nuclear technology be safe enough for widespread development and use," and it is likewise "preempted for that reason." *Id.*

Virginia's ban on uranium mining is preempted on both scores, and the courts below thus erred in upholding it.

I. Virginia's Ban on Uranium Mining Encroaches on the Field Preempted by the Atomic Energy Act.

A. The AEA Preempts State Laws Imposed for the Purpose of Regulating Radiological Safety.

Because the language of a statute "necessarily contains the best evidence of Congress' pre-emptive intent," the preemption inquiry should begin with "text and structure of the statute at issue." *CSX Transp., Inc. v. Easterwood*, 507 U.S. 658, 664 (1993). In this case, the text and structure of the AEA clearly mark the boundaries of the preempted sphere: States may regulate *only* "for purposes other than protection against radiation hazards." 42 U.S.C. § 2021(k). Accordingly, as this Court held over three decades ago, a State law "grounded in [radiological] safety concerns falls squarely within the prohibited field." *PG&E*, 461 U.S. at 213.

1. The Text and Structure of the AEA Define the Field Preempted by the Act Based on the Purpose of State Regulation.

The language and basic architecture of the AEA establish limits on state authority that are drawn based on the *purposes* the States may pursue through regulation, not just the *activities* they may continue to regulate. Congress made this division of authority clear in Section 2021 of the Act.

Since 1954, Congress has encouraged the private development of atomic energy in the national interest under the superintendence of the NRC. In the years following the passage of the 1954 Act, however, some confusion developed over the regulatory role left to the States, in light of the NRC's authority to regulate radiological hazards. Accordingly, in 1959 Congress amended the Act to add a new section, Section 2021, designed both "to clarify the respective responsibilities under this chapter [i.e., the AEA] of the States and the Commission with respect to the regulation of . . . [the] materials" entrusted to the jurisdiction of the NRC and "to promote an orderly regulatory pattern between the Commission and State governments with respect to nuclear development and use and regulation of [these] materials." 42 U.S.C. § 2021(a)(1), (3).

The mechanism Congress adopted is straightforward. Under Section 2021, the NRC may "enter into agreements with the Governor of any State" to transfer to that State the NRC's regulatory jurisdiction over certain materials and activities, including uranium milling and tailings management,[6] if the NRC first

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[6] Specifically, Subsection (b) authorizes agreements permitting States to regulate both "Byproduct materials" and "Source materials." 42 U.S.C. § 2021(b)(1) & (2). The Act defines "Byproduct materials" to include uranium tailings, *id.* § 2014(e)(2), and "Source materials" to include uranium ore, *id.* § 2014(z). Uranium milling and tailings management operations necessarily involve the transfer, delivery, and possession of these materials, thus rendering these activities subject to regulation exclusively by the NRC absent an agreement approved by the Commission authorizing a State to regulate them. *See id.* §§ 2092, 2111(a).

ensures that the state program is "adequate to protect the public health and safety" and satisfies certain other requirements. *Id.* § 2021(b), (d). If the NRC and a State reach such an agreement, subsection (b) provides that "[d]uring the duration of such an agreement it is recognized that the State shall have authority to regulate the materials covered by the agreement for the protection of the public health and safety from radiation hazards." *Id.* § 2021(b). Absent such an agreement, subsection (k) controls, providing that "[n]othing in this section shall be construed to affect the authority of any State or local agency to regulate activities for purposes other than protection against radiation hazards." *Id.* § 2021(k).

These provisions thus establish that without an agreement with the NRC in hand, a State may regulate *only* "for purposes *other than* protection against radiation hazards." *Id.* § 2021(k) (emphasis added). After all, under Subsection (b) a State "ha[s] authority to regulate the materials covered by the agreement for the protection of the public health and safety from radiation hazards," only "*[d]uring the duration* of . . . an agreement" with the NRC. *Id.* § 2021(b) (emphasis added). The limited grant of authority to act for these purposes *during the duration* of such an agreement necessarily implies, by way of the *expressio unius* canon, that the State lacks that authority when such an agreement is *not* in force. "When a statute limits a thing to be done in a particular mode, it includes a negative of any other mode." *Raleigh & Gaston R.R. Co. v. Reid*, 13 Wall. (80 U.S.) 269, 270 (1871).

Moreover, a reading that permitted States to regulate for radiological safety purposes without entering an agreement with the NRC would effectively excise Subsection (k) from the text. "Unless the federal government possessed exclusive authority over radiation hazards," the clarification that States may continue to regulate "for purposes other than protection against radiation hazards . . . would have been meaningless and unnecessary." *Northern States Power Co. v. Minnesota*, 447 F.2d 1143, 1149–50 (8th Cir. 1971), *aff'd*, 405 U.S. 1035 (1972) (quotation marks omitted). Indeed, if a State could regulate for these purposes without entering into such an agreement, *the entire mechanism* set forth by Section 2021 would be rendered superfluous. *See Corley v. United States*, 556 U.S. 303, 314 (2009) ("one of the most basic interpretive canons" is "that a statute should be construed so that effect is given to all its provisions" (brackets and quotation marks omitted)).[7]

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[7] Congress recognized that this was the necessary implication of the text and structure of Section 2021 even as it was being drafted. The initial draft of Section 2021(k) had spelled out "the intention of this Act that State laws and regulations concerning the control of radiation hazards from [the materials regulated by the NRC] shall not be applicable except pursuant to an agreement entered into with the Commission pursuant to subsection b." As the Commission pointed out, however, "with or without the sentence, the Federal Government will clearly have 'preempted' the regulation and control of radiation hazards from [NRC-regulated] materials," and so Congress eliminated this language from the final draft as unnecessary. Letter from A.R. Luedecke, U.S. Atomic Energy Commission (Aug. 26, 1959), *reprinted in Hearings before the Joint Committee on Atomic Energy*, 86th Cong. at 500 (1959); *see also* U.S. Cert-Stage Br. 4–5, 18 n.5.

Section 2021's text and structure thus make clear that "the respective responsibilities under [the AEA] of the States and the Commission" are determined in part by the State's regulatory *purpose*. Without first entering into an agreement with the NRC, the States *may not* regulate for the purpose of "protection of the public health and safety from radiation hazards" arising from materials entrusted to the care of the NRC. 42 U.S.C. § 2021(b). Instead, it may only "regulate activities for *purposes other than* protection against radiation hazards." *Id.* § 2021(k) (emphasis added).

2. This Court's Precedent Confirms that the Scope of the AEA's Preempted Field Is Defined in Part Based on the Purpose of the State Law in Question.

In *PG&E*, this Court confirmed what is already clear from the text and structure of Section 2021: the AEA limits not only the *activities* the States may continue to regulate but also the *purposes* they may pursue when enacting regulations of *any* activity.

PG&E addressed a California law that imposed a "moratorium" on the construction of new nuclear power plants until such time as a state commission determined that "there has been developed . . . a demonstrated technology or means for the disposal of high-level nuclear waste." 461 U.S. at 198.

In analyzing the validity of that moratorium under the AEA, the Court emphasized at the outset that the California statute did not on its face seek to

regulate *an activity* over which the NRC possessed exclusive jurisdiction. To be sure, as California recognized, the States may not regulate *how* nuclear plants are constructed or operated, given "the NRC's exclusive authority over plant construction and operation." *Id.* at 212. But the Court "emphasize[d] that the [moratorium] does not seek to regulate the construction or operation of a nuclear powerplant." *Id.* Instead, California's law addressed the separate matter of *whether* new nuclear powerplants could be constructed at all. And with respect to that issue, the Court concluded, California retained substantial authority: "despite its comprehensiveness, [the AEA] does not at any point expressly require the States to construct or authorize nuclear power plants or prohibit the States from deciding, as an absolute or conditional matter, not to permit the construction of any further reactors." *Id.* at 205. Indeed, Section 2018 of the AEA makes clear that nothing in the Act "shall be construed to affect the authority or regulations of any . . . State[] or local agency with respect to the generation, sale, or transmission of electric power produced through the use of nuclear facilities licensed by the [NRC]." 42 U.S.C. § 2018.

The continuing existence of state jurisdiction over the *activities* of "the generation, sale, or transmission of electric power produced through the use of nuclear facilities," *id.*, however, did not resolve the preemption question. For the crucial line, *PG&E* reasoned, was not *what* California purported to be regulating but rather *why* the State was regulating it. While "the States

retain their traditional responsibility in the field of regulating electrical utilities for determining questions of need, reliability, cost and other related state concerns," the AEA's plain text dictated "that the federal government should regulate the radiological safety aspects involved in the construction and operation of a nuclear plant." *PG&E*, 461 U.S. at 205. That line followed directly, the Court concluded, from Section 2021. "[B]y permitting regulation 'for purposes other than protection against radiation hazards' [Section 2021(k)] underscored the distinction drawn in 1954 between the spheres of activity left respectively to the federal government and the states." *Id.* at 210.

California pressed a different view of the lines drawn by the AEA. Because "a state may completely prohibit new construction" of nuclear power plants under the reservation in Section 2018, the State argued that power over the *activity* in question necessarily includes the power to prohibit new construction "until its safety concerns are satisfied." *Id.* at 212. This Court unequivocally rejected this argument:

> *We reject this line of reasoning*. State safety regulation is not preempted only when it conflicts with federal law. Rather, the federal government has occupied the entire field of nuclear safety concerns, except the limited powers expressly ceded to the states. . . . A state moratorium on nuclear construction grounded in safety concerns falls squarely within the prohibited field. . . . That being the case, it is necessary to determine whether

> there is a non-safety rationale for [California's moratorium].

Id. at 212–13 (emphasis added). The Court ultimately determined that the moratorium in that case "was aimed at economic problems, not radiation hazards," *id.* at 213, and for that reason, the Court upheld the California statute.

The District Court in this case concluded that *PG&E*'s discussion of the *purposes* that States are allowed to pursue was "dicta" and thus "cannot serve as a source of binding authority." Pet.App.73a, 78a. That is plainly incorrect. As this Court has explained many times, "[w]hen an opinion issues for the Court, it is not only the result but also those portions of the opinion necessary to that result by which [the lower courts] are bound." *Seminole Tribe of Florida v. Florida*, 517 U.S. 44, 67 (1996). And *PG&E*'s interpretation of the AEA's preemptive scope as turning in part on the purpose of a challenged state law was a necessary part of that opinion's *ratio decidendi*—"the logical chain of conclusions announced" by the Court as a justification for its ultimate holding. *Liverpool & G.W. Steam Co. v. Phenix Ins. Co.*, 129 U.S. 397, 439 (1889). The Court rested its holding on an analysis of whether California's law was "grounded in safety concerns," *PG&E*, 461 U.S. at 213, and it is *that* "logical chain of conclusions," *Liverpool*, 129 U.S. at 439, that has controlling *stare decisis* effect, *Seminole Tribe*, 517 U.S. at 67.

This point is further confirmed by Justice Blackmun's separate concurrence. While Justice Blackmun

agreed that California's moratorium should be upheld, he wrote separately (joined by Justice Stevens) to express his disagreement with the majority's conclusion "that a State may not prohibit the construction of nuclear power plants if the State is motivated by concerns about the safety of such plants." *PG&E*, 461 U.S. at 223 (Blackmun, J., concurring in part and concurring in the judgment). "In my view, a ban on construction of nuclear power plants would be valid even if its authors were motivated by fear of a core meltdown or other nuclear catastrophe." *Id.* at 229.

This Court's two subsequent encounters with AEA preemption further confirm that the line between federal and state authority is based in part on the State's dominant motives or concerns. In *Silkwood*, the Court reaffirmed *PG&E*'s core holding that "the federal government has occupied the entire field of nuclear safety concerns," noting that "Congress' decision to prohibit the states from regulating the safety aspects of nuclear development was premised on its belief that the Commission was more qualified to determine what type of safety standards should be enacted in this complex area." 464 U.S. at 249, 250. And in *English*, the Court again recognized that "[*PG&E*] defined the pre-empted field, in part, *by reference to the motivation behind the state law*." 496 U.S. at 84 (emphasis added).

B. Because Virginia Has Conceded that Its Ban Is Imposed for the Purpose of Regulating the Radiological Safety of Milling and Tailings Activities, It Is Preempted.

Virginia's uranium mining ban, Respondents conceded for purposes of their motion to dismiss, is motivated by the purpose of protecting against the radiological hazards of uranium milling and the storage of uranium tailings. Yet both courts below declined to find the ban preempted, reasoning that because Virginia's ban *facially purported* to regulate a matter outside the NRC's jurisdiction, no analysis of the *purpose actually served* by the ban was necessary or appropriate. That was error.

1. As shown above, Petitioners alleged—and Respondents, for the purpose of their motion to dismiss, conceded—that Virginia's uranium ban is "grounded in [radiological] safety concerns" related to materials that remain subject to exclusive NRC jurisdiction: mined uranium ore and uranium tailings. Petitioners' complaint alleged at length and in detail that the ban "was almost exclusively based upon radiological safety concerns related to tailings management" and that "[t]he true design and function of Virginia's ban on uranium mining . . . is to act as an absolute bar on the construction of a tailings management facility in the Commonwealth." Compl., Pet.App.232a. And Respondents *conceded* that Virginia's ban is motivated by these concerns, recognizing that "Rule 12(b)(6) required [them] to accept as true" Petitioners' "claims about legislative motive." J.A.216 & n.58.

Indeed, as recounted above, the record evidence leaves *no conceivable doubt* that Virginia's ban was motivated by concerns regarding the radiological hazards of milling and tailings storage. Not only does the history of the ban from 1982 onward reveal its true purpose; the Commonwealth's motives are plain from the text of the law itself. As detailed above, the 1983 bill that enacted the ban in its current form simultaneously directed a comprehensive state study of the radiological safety aspects of milling and tailings storage—directing the examination of every last detail, from the probable "capacity of the mill" to the "size of the tailings disposal area" and its "hydrology, hydrogeology, and surficial and bedrock geology." Act of Feb. 24, 1983, ch. 3, 1983 Va. Acts 3, Pet.App.184a–85a.

Accordingly, Virginia's uranium ban is squarely "grounded in [radiological] safety concerns" related to materials and activities that are indisputably within the NRC's exclusive authority, and under the plain text of Section 2021 and this Court's precedent, it is preempted. *PG&E*, 461 U.S. at 213.

2. The panel majority below nonetheless held that the ban survives preemption, declining *even to conduct* the purpose analysis required by Section 2021 and this Court's decision in *PG&E*. That analysis applies, according to the majority, only "[i]f a state purports to regulate an activity that is also regulated by the Act." Pet.App.9a. And because the NRC does not regulate conventional uranium mining, Virginia's ban is not in the field preempted by the Act. Pet.App.11a. That conclusion was flatly inconsistent with *PG&E*'s

central reasoning, and its effect is to replace the purpose-based preemption inquiry prescribed by Congress in Section 2021 with a wholly different "activity"-based inquiry of the lower courts' own making.

The central import of Section 2021 is that to determine whether a state regulation is interfering with the NRC's authority, a court must look not solely at what activity or material the state law *purports* to be regulating, but rather at what the regulation's *true* purpose and effect are. State laws will rarely *purport* to apply only to matters outside the State's jurisdiction. But Congress necessarily concluded that such a claim cannot be taken at face value. Any other rule would allow the States to "regulate the materials" within the NRC's jurisdiction "for the protection of the public health and safety from radiation hazards" *without obtaining an agreement with the NRC*, through the simple expedient of pretextually regulating some activity or material outside the NRC's regulatory ambit. 42 U.S.C. § 2021(b); *see also* U.S. Cert-Stage Br. 13 ("A State's purposeful effort to regulate the radiological hazards of AEA activities is preempted even if the State attempts to regulate those hazards indirectly, as by prohibiting necessary antecedent activities that fall outside direct federal control."). Since *McCulloch v. Maryland*, it has been settled that a legislature may not "under the pretext of executing its powers, pass laws for the accomplishing of objects not intrusted to the government." 4 Wheat. (17 U.S.) 316, 423 (1819).

The approach adopted by the court below is inconsistent with the very nature of any inquiry into a

statute's purpose or motivation. The *point* of such an inquiry is to identify cases in which the State is using its authority to regulate an activity properly within its own sphere as a pretext to enable it to regulate in the preempted field. By directing in the AEA that the line between federal and state authority must be drawn based in part on the *purpose* of a State's regulation rather than the activity it governs, Congress has blocked the deployment of such pretexts, and Respondents cannot short-circuit the inquiry at the outset merely *by pointing to the pretext*. The Jim Crow literacy tests were not insulated from Equal Protection scrutiny even though they *purported* only to establish neutral rules governing the educational qualifications for voting. Under the approach adopted below, by contrast, the AEA's purpose-based inquiry is confined to those rare instances in which a State *admits* that it is regulating "an activity that is also regulated by the Act." Fourth Circuit Opinion, Pet.App.9a; *see also* U.S. Cert-Stage Br. 16 ("[T]he 'purpose' test has practical relevance only where a State is operating within a field where a State enjoys substantive authority to regulate.").

Even that rule is insufficient to save Virginia's uranium ban, however, for in this case Respondents *have* admitted, for purposes of the underlying motion to dismiss, that the ban is pretextual, and in reality is based on preempted concerns. The Commonwealth banned uranium mining for the purpose of precluding *milling and tailings storage operations* because it believed, contrary to the NRC's judgment, that they pose a radiological danger to public health and safety.

Whatever the application of Section 2021's purpose test in cases where the State's motivation is ambiguous or unclear, if it is to have any force at all it surely must preempt a law that the State *admits* is a pretext.

The approach adopted below is also directly contrary to this Court's teaching in *PG&E*. In that case, too, the state law at issue *purported* to regulate a matter squarely outside the NRC's authority. As *PG&E* emphasized and then emphasized again, the AEA "does not at any point expressly require the States to construct or authorize nuclear power plants or prohibit the States from deciding, as an absolute or conditional matter, not to permit the construction of any further reactors." 461 U.S. at 205. To the contrary, the Act *expressly preserves* state jurisdiction over "the generation, sale, or transmission of electric power." *Id.* at 208 (quoting 42 U.S.C. § 2018).

And the *PG&E* Court took pains to "emphasize[] that the [California] statute *does not* seek to regulate the construction or operation of a nuclear powerplant," 461 U.S. at 212 (emphasis added)—by prescribing, for example, the thickness of the walls, qualifications for employees, or other similar details. But this Court held that the fact that the challenged law on its face regulated a matter that all agreed was within the State's jurisdiction was not sufficient, standing alone, to save California's moratorium from preemption. The fact that "a state may completely prohibit new construction" for *some* purposes *did not mean* that it could do so for radiological safety purposes; California could not use its conceded authority over nuclear power

generation to require that "its safety concerns [be] satisfied by the federal government." *Id.*

So too with Respondents' uranium mining ban. On its face, the Commonwealth's statute may purport to regulate only the mining of uranium, an activity beyond the NRC's jurisdiction. But the fact that "a state may completely prohibit [uranium mining]" *for some purposes* cannot, given the plain text of Section 2021, mean that it may do so until the federal government has satisfied the State's "safety concerns" about uranium milling and tailings storage. *Id.* The Virginia law at issue in this case thus raises precisely the same question that this Court held must be answered in *PG&E*. The courts below erred in refusing to ask that question.

3. The Fourth Circuit panel majority gave another reason for declining "to look past the statute's plain meaning to decipher whether the legislature was motivated to pass the ban by a desire to regulate uranium milling or tailings storage." Pet.App.14a. Noting that "[t]here are some areas of law—such as actions arising under the Equal Protection Clause of the Fourteenth Amendment—where a legislature's improper motive *itself* is cause for courts to find a law [invalid]" and that a court thus "may conduct a pretext analysis to ascertain a legislature's true motive" in these circumstances, the panel majority reasoned that "this is not such a case" because Petitioners have "not allege[d] that the Virginia legislature acted with discriminatory intent. . . ." Pet.App.15a. Accordingly, it "adhere[d] to the edict that courts 'will not strike down an otherwise constitutional statute on the basis of an alleged illicit

legislative motive.'" *Id.* (quoting *United States v. O'Brien*, 391 U.S. 367, 383 (1968)).

Once again, this line of reasoning cannot be squared either with the text of the AEA or this Court's precedent interpreting it. Of course, since this is not an equal protection challenge, Petitioners have not alleged "discriminatory intent" of the kind proscribed by the Fourteenth Amendment. But that is irrelevant, for Congress has itself directed that in this context, too, "a legislature's improper motive *itself* is cause for courts to find a law" preempted under the AEA. *Id.* The direct and necessary implication of Congress's statutory instructions, this Court has recognized, is that the AEA's preemptive scope is "defined . . . , in part, by reference to the motivation behind the state law." *English*, 496 U.S. at 84. The panel below erred in refusing to conduct the preemption analysis expressly prescribed by Congress.

C. The Approach to Preemption Adopted Below Would Threaten To Cripple the Atomic Energy Industry, Nullifying a Core Purpose of the AEA.

"There is little doubt that a primary purpose of the Atomic Energy Act was, and continues to be, the promotion of nuclear power." *PG&E*, 461 U.S. at 221. The refusal by the courts below to "conduct a pretext analysis to ascertain [Virginia's] true motive," aside from being contrary to the AEA's plain language and this Court's precedents, vitiates that core congressional purpose. Section 2021 governs the allocation of federal

and state authority not only over the uranium industry, but also over every other matter within the NRC's regulatory ambit—from the construction and operation of nuclear power plants, 42 U.S.C. § 2133, and the storage of radioactive waste, *id.* §§ 2073, 2092, 2093, 2111, 2201(b), to the development of the atomic materials used by our armed forces, *id.* § 2121; *see also* U.S. Cert-Stage Br. 22 (AEA covers "each . . . stage of the nuclear fuel cycle"). And the approach adopted below would enable state and local governments to second-guess the NRC's judgments across the entire universe of these issues, effectively declaring open season on the Nation's atomic energy industry.

This case is not the first—nor is it likely to be the last—in which state or local governments seek to frustrate the development or operation of nuclear facilities based on localist radiological safety concerns not shared by the experts at the NRC. *See id.* ("States will likely continue to face pressures to restrict or prohibit private nuclear-energy development."). Prior to the decision below, using the framework established in *PG&E*, the lower federal courts have fashioned an approach to preemption that has consistently protected the national interest in "encourag[ing] the development of the atomic energy industry," 42 U.S.C. § 2012(i), from such localist interference. Time and again, the courts have employed that approach to strike down efforts by States, counties, and municipalities to frustrate the national interest in atomic energy.

Applying the preemption framework set forth by Section 2021 and affirmed by *PG&E*, the lower courts

have, for instance, routinely set aside state and local efforts to prevent the storage of spent nuclear fuel ("SNF") or other radioactive materials within their borders. Through the state laws at issue in *Skull Valley*, Utah attempted to prevent the storage of SNF within its borders by enacting a series of restrictions that ostensibly regulated activities that were squarely within the State's police power. One provision barred "counties from providing 'municipal-type services,' including fire protection, garbage disposal, water, electricity, and law enforcement, to SNF transportation and storage facilities within the county." 376 F.3d at 1245. Another provision took control of "the only road permitting access to the [proposed spent fuel storage] facility . . . by designating it as a state highway," and then "requir[ed] the consent of the governor and the state legislature" before any "company engaged in the transportation or storage of SNF" was allowed to drive on it. *Id.* at 1252. Yet another "revoke[d] statutory and common-law limited liability for officers, directors, and equity-interest owners of companies operating SNF storage facilities in Utah." *Id.* at 1229.

It is difficult to conceive of activities closer to the heart of a State's traditional police power—and more remote from the activities regulated by the NRC—than these. The provision of utilities, police and fire protection, and sewer access are all matters that lie at the core of State power; and obviously nothing in the AEA regulates the use of state roads or the details of corporate law. But because Utah's regulation of those activities was motivated by radiological safety

concerns related to materials within the NRC's regulatory jurisdiction, the Tenth Circuit concluded that Utah's purported regulation of these state and local matters fell within the AEA's preempted field.

> Although it is true that the County Planning Provisions address law enforcement, fire protection, waste and garbage collection and other similar matters that have been traditionally regulated by local governments, that fact does not trump the preemption analysis that the controlling Supreme Court decisions require us to undertake. Under that analysis, we consider the purpose and effect of the state law at issue, and, as a result, *a state cannot use its authority to regulate law enforcement and other similar matters as a means of regulating radiological hazards*.

Id. at 1247–48 (emphasis added). Because Utah's law was a pretextual attempt to regulate the storage of SNF, the Tenth Circuit held that each of the pretextual restrictions was "grounded in safety concerns" and therefore invalid. *Id.* at 1246, 1248, 1251, 1252.

Similarly, in *Illinois v. General Electric Co.*, the Seventh Circuit held that the AEA preempted an Illinois statute that banned the storage of certain SNF within the State. 683 F.2d 206, 214–16 (7th Cir. 1982). The court rejected Illinois's theory that it could regulate SNF pursuant to its residual authority over air pollution under the Clean Air Act, since that authority did not give it "carte blanche" to "disrupt[] the federal atomic energy program." *Id.* at 216. Likewise, in *United States v. Kentucky*, the Sixth Circuit struck

down an attempt by Kentucky's environmental protection agency to prevent the storage of radioactive waste at a site within the State, reasoning that the State's authority "to regulate solid waste disposal is irrelevant" because its efforts "represent an attempt . . . to regulate materials covered by the AEA based on the [state agency's] safety and health concerns, and are thus preempted." 252 F.3d 816, 823 (6th Cir. 2001). *See also United States v. Manning*, 527 F.3d 828, 837–39 (9th Cir. 2008) (ballot initiative preventing storage of additional radioactive waste "to protect the health and safety of Washington residents and the environment" preempted); *Jersey Cent. Power & Light Co. v. Lacey Twp.*, 772 F.2d 1103, 1112 (3d Cir. 1985) (local ordinance banning the importation of SNF or other radioactive waste preempted); *Abraham v. Hodges*, 255 F. Supp. 2d 539, 553 (D.S.C. 2002) (state executive order "prohibiting the transportation of plutonium within South Carolina" preempted).

Another area that has inspired frequent and energetic attempts at regulatory interference by state and local governments is the very matter at issue in *PG&E*: the construction and operation of nuclear power plants.

For instance, the Second Circuit's *Entergy* decision dealt with a Vermont statute that sought to shut down a nuclear power plant by providing that "a nuclear energy generating plant may be operated in Vermont only with the explicit approval of the General Assembly." 733 F.3d at 403. Like the California moratorium at issue in *PG&E*, this statute on its face regulated

only "the generation, sale, or transmission of electric power produced through the use of nuclear facilities," activities over which the AEA expressly preserves state authority. 42 U.S.C. § 2018. Moreover, in an obvious effort to sidestep *PG&E*'s definition of the preempted field, the Vermont Legislature included in its statute a declaration specifically stating that the Act's purpose was *not* grounded in radiological safety concerns, but rather was designed to foster a "larger societal discussion of broader economic and environmental issues relating to the operation of a nuclear facility in the state. . . ." *Entergy*, 733 F.3d at 403.

The Second Circuit, however, refused to "blindly accept the articulated purpose" of Vermont's statute, noting that "[i]f that were the rule, legislatures could nullify nearly all unwanted federal legislation by simply publishing a legislative committee report articulating some state interest or policy—other than frustration of the federal objective—that would be tangentially furthered by the proposed state law." *Id.* at 416 (quotation marks omitted). Instead, the court held that *PG&E* "requires us to conduct a . . . searching review to determine whether a statute was enacted based upon radiological safety concerns," *id.*, a review that included scrutinizing "the statute's legislative history to determine if it was passed with an impermissible motive," *id.* at 418. After closely reviewing the available evidence of legislative motivation, which revealed that "both state legislators and regulators" had with "remarkable consistency . . . expressed concern about radiological safety and expressed a desire to evade federal preemption," the court concluded that

"radiological safety [was] the Vermont legislature's primary purpose in enacting the statute." *Id.* at 420. Accordingly, it struck the statute down.

Once again, *Entergy* is far from the only instance in which the lower courts have invalidated efforts by state and local officials to second-guess the NRC's judgment concerning the safest way to operate nuclear facilities. In *County of Suffolk v. Long Island Lighting Co.*, to take one example, the Second Circuit held that a county's lawsuit seeking to enjoin the construction of a nuclear power plant within its borders based on "common law tort and contract principles" was preempted: "The gist of [the County's] complaint" was that the plant's design "posed a substantial risk to the public safety." 728 F.2d 52, 55, 56, 59–60 (2d Cir. 1984); *see also Northern States Power Co. v. Prairie Island Mdewakanton Sioux Indian Cmty.*, 781 F. Supp. 612, 613, 618 (D. Minn. 1991) (preempting tribal ordinance that would have prevented a local power company from transporting "various radioactive materials necessary to the [power plant's] operation" over the only access road through the Tribe's reservation); *Northern States Power Co. v. Minnesota*, 447 F.2d 1143, 1147, 1154 (8th Cir. 1971) (AEA preempted Minnesota's attempt to impose limits on radioactive discharges from nuclear facility that were "substantially more stringent" than the NRC's limits), *aff'd*, 405 U.S. 1035 (1972).

These lower court decisions correctly turning back state and local efforts to interfere with the NRC's judgment on nuclear matters illustrate the danger posed by the Fourth Circuit's disregard for the purpose-based

approach to preemption articulated in Section 2021 and *PG&E*. The ruling by the panel majority provides what amounts to a road map showing state and local governments how to thwart the AEA's purpose of promoting nuclear energy and to vindicate localist concerns about radiological safety even when they are contradicted by the NRC's expert judgment. A state wishing to prevent the storage of SNF within its borders could, like Utah in *Skull Valley*, do so by denying the storage company the use of its roads and rails—so long as it studiously avoided "targeting spent nuclear fuel directly" or "specifically mention[ing] this NRC-regulated activity" on the face of its law. Pet.App.16a. And a county wishing to impose its own set of safety requirements on the construction or operation of a local nuclear plant would be free to usurp the NRC's authority on these matters by, for example, denying police and fire protection, or the protection of limited shareholder liability, to the plant's owner unless it met the county's demands—again, as long as the county carefully drafted its ordinance in a way that did "not purport to regulate an activity within the [AEA]'s reach." Fourth Circuit Opinion, Pet.App.18a; *see also* U.S. Cert-Stage Br. 22 ("Under the Fourth Circuit's analysis, States could effectively prevent federally regulated activities that the States believe to be unsafe, by erecting 'bottlenecks' at antecedent stages that are not themselves subject to federal regulation.").

The dangerous implications of this approach for the United States' nuclear energy industry are bad enough even when limited to the facts of this case. As

discussed above, both Congress and the Executive Branch have routinely emphasized the critical importance of ensuring a reliable uranium supply, given both the military applications of the resource and its use in fueling nearly one-fifth of the Nation's total domestic electricity production. *See, e.g.*, 42 U.S.C. §§ 2296b-3(a), 2296b-6(a); Final List of Critical Minerals 2018, 83 Fed. Reg. 23,295 (May 18, 2018). Yet we continue to rely on foreign sources to provide 94 percent of this vital national resource, and even worse, we depend upon Russia and its client states for nearly 40 percent of our supply. Allowing States like Virginia to impede domestic uranium production—based on radiological safety concerns that have been entrusted exclusively to the NRC—thus seriously undermines the AEA's purpose of fostering "the development, use, and control of atomic energy" for "peaceful as well as military purposes." 42 U.S.C. § 2011. This Court should not sanction an approach to preemption that allows States to frustrate the purposes of the AEA by pretextually circumventing Section 2021 in this way.

II. Virginia's Ban Is Also Preempted as an Obstacle to the Full Implementation of the AEA's Objectives.

In addition to holding that the AEA "occupied the entire field of nuclear safety concerns," *PG&E*, 461 U.S. at 212, this Court also held that *beyond* the borders of this exclusively federal field, ordinary principles of conflict preemption continue to apply. Indeed, the Court emphasized that "[a] state prohibition on

nuclear construction for safety reasons would also be in the teeth of the Atomic Energy Act's objective to insure that nuclear technology be safe enough for widespread development and use—and would be preempted for that reason." *Id.* at 213. Virginia's uranium mining ban not only falls within the AEA's prohibited field; it also directly conflicts with federal law in just this way.

State law is in conflict with federal law if, *inter alia*, it "stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress," *Hines v. Davidowitz*, 312 U.S. 52, 67 (1941), by "upset[ting] the careful balance struck by Congress" when it enacted a scheme of federal regulation, *Edgar v. MITE Corp.*, 457 U.S. 624, 634 (1982). Here, federal law governing the use, handling, and production of nuclear materials strikes a delicate balance between two critically important national objectives. On the one hand, Congress was acutely aware that activities involving radiological materials in general—and uranium milling and tailings operations in particular—present "a serious threat to public health and safety" if they are not appropriately and safely managed. 1978 Cong. Rec., J.A.196. Congress concluded that "the [Nuclear Regulatory] Commission was more qualified to determine what type of safety standards should be enacted in this complex area," *Silkwood*, 464 U.S. at 250, and accordingly placed "the entire field of nuclear safety concerns," *PG&E*, 461 U.S. at 212, exclusively in the expert hands of the NRC.

On the other hand, "[t]here is little doubt that a primary purpose of the Atomic Energy Act was, and continues to be, the promotion of nuclear power." *Id.* at 221; *see also* S. 1717 Hearings, J.A.201 ("Of course, everybody should be permitted to mine [nuclear source] material."); Joint Committee Report, J.A.208–09 (Congress sought to foster "greater private participation" in the development of affordable "peacetime atomic power"). Federal law governing the milling of uranium and the management of tailings thus strikes a particular balance between the goals of encouraging domestic uranium development and ensuring the public health and safety against unacceptable radiological risks. So long as the expertly designed and administered federal safety standards and requirements are satisfied, Congress has made the considered judgment that uranium development can and should go forward without localist interference based on radiological risk.

Virginia's ban on uranium mining upsets the balance established by federal law in the most jarring way possible—by flat-out *prohibiting* the achievement of one of Congress's "primary purpose[s]": "the promotion of nuclear power." *PG&E*, 461 U.S. at 221. Petitioners cannot process uranium and store its tailings safely and legally as allowed by federal law if they are prohibited from mining the uranium in the first place. To appreciate the degree to which Virginia's ban frustrates the objectives of federal law, one need only imagine what would become of Congress's desire to encourage the private development and use of uranium if all 50 states enacted similar legislation, based

on localist concerns like Virginia's. *Cf. Arizona v. United States*, 132 S. Ct. 2492, 2502 (2012) ("If [the challenged] statute were valid, every State could give itself independent authority to prosecute federal registration violations, diminish[ing] the [Federal Government]'s control over enforcement and detract[ing] from the integrated scheme of regulation created by Congress." (second, third, and fourth alterations in original) (citations omitted) (quotation marks omitted)).

Indeed, the impermissibility of Virginia's indirect, de facto ban of milling and tailings management is all the more obvious in light of the *direct* route Congress created for States to take over those pieces of the NRC's jurisdiction. As discussed above, Section 2021 of the AEA was deliberately designed by Congress to "establish procedures and criteria" for the "assumption . . . by the States" of "certain of the Commission's regulatory responsibilities." 42 U.S.C. § 2021(a)(2), (4). To those ends, Congress authorized the States to "enter into agreements" with the NRC "to regulate the materials covered by the agreement" for "the duration of such an agreement." *Id.* § 2021(b).

But entering into such an agreement is not a mere formality; a State seeking to reach an agreement with the NRC must first convince the expert federal regulators that its proposed regulations are "compatible with the Commission's program for the regulation of [the] materials [covered by the agreement]," and that they are "adequate to protect the public health and safety with respect to [those] materials." *Id.* § 2021(d)(2). After all, it was Congress's concern that the States are

ill-equipped "to determine what type of safety standards should be enacted in this complex area" that led it to "prohibit [them] from regulating the safety aspects of nuclear development" to begin with. *Silkwood*, 464 U.S. at 250. It thus ensured that a State is not allowed to take the regulatory tiller under Section 2021 unless and until the experienced regulators at the NRC are satisfied that the State's regulatory program and personnel are sufficiently advanced and trained to advance the AEA's twin aims of promoting the development of nuclear energy while also assuring that the public health and safety are protected from radiological harm.

Congress has thus provided Virginia a path by which the Commonwealth can assume regulatory jurisdiction over milling and tailings management, but it has coupled that avenue with strict procedural safeguards. Virginia's *outright de facto ban* on milling and the storage of tailings circumvents those congressionally prescribed procedures. It is thus preempted. *See Gade v. National Solid Wastes Mgmt. Ass'n*, 505 U.S. 88, 98–101 (1992) (holding that Illinois's attempt to enforce training standards for certain hazardous waste workers that were stricter than the Occupational Safety and Health Administration's ("OSHA") requirements was preempted because "the only way a State may regulate an OSHA-regulated occupational safety and health issue is pursuant to an approved state plan that displaces the federal standards," and "[i]f a State could supplement federal regulations without undergoing the [Congressionally designed]

approval process," then those procedural protections "would easily be undercut").

The panel majority below ignored this reasoning, suggesting that allowing States to frustrate uranium development does not actually obstruct the AEA's purposes. "[O]ver ninety percent of the uranium used by the country's atomic-energy industry is imported," the panel majority noted, and "if push comes to shove, the Atomic Energy Act allows the federal government to forcibly expand the production of domestic source material" by condemning uranium deposits and mining the ore itself. Pet.App.19a.

These contentions are deeply unpersuasive. As both Congress and the executive branch have repeatedly found, our dependency on foreign uranium is *an acute source of concern*, not a reason to permit State laws to even *further* constrict our limited domestic supply. *See supra*, pp. 6–8, 53–54. And forcing the federal government to condemn and pay just compensation for any uranium deposits it wishes to mine *would itself* be directly contrary to the purposes of the AEA. That statute, after all, was enacted to "encourage[] *the private sector* to become involved in the development of atomic energy for peaceful purposes," *PG&E*, 461 U.S. at 207 (emphasis added), not to burden the taxpayer with an expensive federal takeover of the industry.

CONCLUSION

The Court should reverse the judgment of the Fourth Circuit.

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No. 16-1275

In the Supreme Court of the United States

VIRGINIA URANIUM, INC., ET AL., PETITIONERS,

v.

JOHN WARREN, ET AL.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT

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INTRODUCTION

This case is about whether a federal statute regulating what happens "*after* [uranium's] removal from its place of deposit in nature," 42 U.S.C. § 2092 (emphasis added), can be stretched to preempt a state law addressing what happens *before* it is removed—that is, *whether* the uranium will be mined in the first place. The answer is no.

There is no doubt that Congress could regulate uranium mining directly or limit States' ability to do so. But Congress has not enacted such a law. To the contrary, it is undisputed that the Atomic Energy Act, 42 U.S.C. §§ 2011 *et seq.*, does not regulate (and has never regulated) conventional uranium mining on nonfederal lands. Indeed, the Federal Government acknowledges that the States' inherent sovereign power to regulate such activities—up to and including banning them altogether—remains intact. See U.S. Cert. Br. 18.

Instead, petitioners insist that Virginia's three-decades-old choice not to license uranium mining within its borders is preempted because of the subjective motivations that (petitioners say) produced it. But this Court has already canvassed why any such approach to preemption would be deeply misguided. As Justice Scalia's opinion for the Court in *Shady Grove Orthopedic Associates, P.A.* v. *Allstate Insurance Co.*, 559 U.S. 393 (2010) (*Shady Grove*) explained, "determining whether state and federal rules conflict based on the subjective intentions of the state legislature is

an enterprise destined to produce 'confusion worse confounded.'" *Id.* at 404 (citation omitted).

For one thing, there is the prospect of different results for otherwise-identical state laws. See *Shady Grove*, 559 U.S. at 404 ("one State's statute could survive pre-emption . . . while another State's identical law would not, merely because its authors had different aspirations"). What is more, a preemption analysis that turned on "the subjective intentions of the state legislature" would require trial courts "to discern, in every . . . case, the purpose behind any putatively pre-empted state . . . rule." *Id.* "That task w[ould] often prove arduous," and "[h]ard cases w[ould] abound." *Id.* "Many laws further more than one aim, and the aim of others may be impossible to discern." *Id.* "Predictably, federal judges would be condemned to poring through state legislative history—which may be less easily obtained, less thorough, and less familiar than its federal counterpart." *Id.* at 405.

Petitioners offer two basic arguments. First, they contend that the Atomic Energy Act and this Court's decisions construing it mandate a motivation-based preemption analysis in this context. Second, petitioners insist that the problems identified in *Shady Grove* simply vanish because of this case's procedural posture.

Petitioners are wrong on both counts. "There is no federal pre-emption *in vacuo*, without a constitutional text or a federal statute to assert it." *Puerto Rico Dep't of Consumer Affairs* v. *Isla Petroleum Corp.*, 485 U.S. 495, 503 (1988). Yet petitioners never specify which

"enacted statutory text," *id.* at 501, they believe is doing the preemptive work here. Instead, petitioners' entire argument depends on contorting fragments of three sentences in two opinions from more than a quarter of a century ago—opinions that both *unanimously* rejected preemption challenges to state laws impacting matters far closer to the heartland of federal concern than the longstanding (and long-unchallenged) state policy at issue here.

Nor can petitioners escape these problems by relying on a "concession we have never made." Resp. Supp. Cert. Br. 2. Of course, any case-specific stipulation about "the subjective intentions of the state legislature," *Shady Grove*, 559 U.S. at 404, would matter only if those "subjective intentions" were relevant to the preemption question at issue—and, as we will explain, they are not. In addition, "we have *never* conceded that legislative purpose is purely a question of fact (historical or otherwise)" or "that the Virginia legislature's *sole* purpose in imposing a moratorium on conventional uranium mining was based on radiological safety concerns associated with uranium milling and tailings." Resp. Supp. Cert. Br. 6–7. To the contrary, the statutory text indicates that Virginia's General Assembly had a variety of concerns in mind, some of which were, even under petitioners' view, unquestionably permissible.

The decision below should be affirmed.

OPINIONS BELOW

The opinion of the court of appeals (Pet. App. 1a–52a) is reported at 848 F.3d 590. The memorandum opinion of the district court (Pet. App. 53a–82a) is reported at 147 F. Supp. 3d 462.

JURISDICTION

The judgment of the court of appeals was entered on February 17, 2017. The petition for a writ of certiorari was filed on April 21, 2017, and granted on May 21, 2018. This Court's jurisdiction rests on 28 U.S.C. § 1254(1).

STATUTORY PROVISIONS INVOLVED

The most directly relevant provisions of federal and state law are reproduced in the appendix to the petition for a writ of certiorari. Pet. App. 83a–189a.

STATEMENT

This case's most stubborn facts are these:

- The authority to determine whether to permit a physically intrusive and destructive activity like mining lies at the heart of a State's inherent power to regulate for the health and welfare of its citizens;
- The federal statute on which petitioners rely does not regulate—and has never regulated—conventional uranium mining on private land; and
- This Court has already recognized that the statutory provisions on which petitioners rely were "not intended to cut back on pre-existing

> state authority outside the [Federal Government's] jurisdiction." *Pacific Gas & Elec. Co.* v. *State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 209–10 (1983) (*Pacific Gas*).

We begin with the history of the Atomic Energy Act, 42 U.S.C. §§ 2011 *et seq.*

1. a. The first Atomic Energy Act was enacted in 1946, eleven months after the end of World War II. See Pub. L. No. 79-585, 60 Stat. 755 (Aug. 1, 1946) (1946 Act). Until then, nuclear technology was exclusively controlled by the United States Army as part of the Manhattan Project. See F.G. Gosling, U.S. Dep't of Energy, *The Manhattan Project: Making the Atomic Bomb* 99, 102–03 (2010). Under the 1946 Act, "the use, control, and ownership of nuclear technology remained a federal monopoly," *Pacific Gas*, 461 U.S. at 206, and non-federal parties were required to obtain a license from the newly created Atomic Energy Commission (Commission) before "transfer[ring]," "deliver[ing]," "receiv[ing] possession of or title to," or "export[ing]" uranium. § 5(b)(2), 60 Stat. 761 (transfer provision).[1]

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[1] The Atomic Energy Commission (AEC) was abolished in 1974, and its functions divided among several agencies. See *Huffman* v. *Western Nuclear, Inc.*, 486 U.S. 663, 666 n.4 (1988). For simplicity's sake, we use "Commission" to refer both to the AEC and the Nuclear Regulatory Commission, which handles the "licensing and related regulatory functions" formerly handled by the AEC. *Id.* (citation omitted); see *Vermont Yankee Nuclear Power Corp.* v. *Natural Res. Def. Council*, 435 U.S. 519, 526 n.2 (1978) (following the same approach).

But even while "contemplat[ing] that the development of nuclear power would be a Government monopoly," *Duke Power Co.* v. *Carolina Envtl. Study Grp.*, 438 U.S. 59, 63 (1978), the 1946 Act did not regulate (or even address) uranium mining on private land. The 1946 Act did not, for example, declare that all uranium in the United States belonged to the Federal Government. Cf. § 5(b)(7), 60 Stat. 762 (so declaring for "source material" found on federally owned lands); § 5(a)(2), 60 Stat. 760 (so declaring for *all* "fissionable material"). Instead, the 1946 Act "authorized and directed" the Commission "to purchase, take, requisition, condemn, or otherwise acquire, supplies of source materials or any interest in real property containing deposits of source materials necessary to effectuate the provisions of this Act." § 5(b)(5), 60 Stat. 762. And even the 1946 Act's otherwise sweeping transfer provision was expressly limited to the movement of uranium "*after* removal from its place of deposit in nature." § 5(b)(2), 60 Stat. 761 (emphasis added); see S. Rep. No. 79-1211, at 18 (1946) (noting that "source materials in their natural state are not capable of dangerous misuse").

b. In 1954, Congress revised the Atomic Energy Act to increase the private sector's role. See Atomic Energy Act of 1954, Pub. L. No. 83-703, 68 Stat. 919 (Aug. 30, 1954) (1954 Act). Concluding "that the national interest would be best served if the Government encouraged the private sector to become involved in the development of atomic energy for peaceful purposes," the 1954 Act "provid[ed] for licensing of private construction, ownership, and operation of commercial

nuclear power reactors . . . under strict supervision by the . . . Commission." *Duke Power*, 438 U.S. at 63.

Despite numerous changes, however, the 1954 Act maintained continuity with the 1946 Act about the scope of the Commission's authority to regulate uranium. The Commission retained "exclusive jurisdiction to license the transfer, delivery, receipt, acquisition, possession, and use of nuclear materials," *Pacific Gas*, 461 U.S. at 207, as well as the power to acquire nuclear materials directly by way of purchase or condemnation, 1954 Act, § 66, 68 Stat. 933 (42 U.S.C. § 2096). But, as with the 1946 Act, the 1954 Act reiterated that private parties need not obtain any sort of uranium-based license from the Commission until "*after* its removal from its place of deposit in nature." § 62, 68 Stat. 932 (42 U.S.C. § 2092) (emphasis added). Indeed, the 1954 Act went even further than the 1946 Act by prohibiting the Commission from requiring any "reports" about "any source material *prior to* its removal from its place of deposit in nature," § 65(a), 68 Stat. 933 (42 U.S.C. § 2095) (emphasis added).

c. In 1959, the year of the famous "kitchen debate" between then-Vice President Richard Nixon and Soviet Premier Nikita Khrushchev, Congress expanded the States' role in nuclear development by enacting new provisions now codified at 42 U.S.C. § 2021 (Section 2021). See Act of Sept. 23, 1959, Pub. L. No. 86-373, 73 Stat. 688 (1959 Act). Under the 1959 Act, "[t]he Commission was authorized to turn over some of its regulatory authority to any State which would adopt a suitable regulatory program," while "retain[ing]

exclusive regulatory authority over 'the disposal of'" certain material that "'should . . . not be disposed of without a license from the Commission.'" *Silkwood* v. *Kerr-McGee Corp.*, 464 U.S. 238, 250 (1984) (quoting 42 U.S.C. § 2021(c)(4)).

"[T]he point of the 1959 Amendments was to heighten the States' role." *Pacific Gas*, 461 U.S. at 209. In particular, "Congress made clear that [Section 2021] was not intended to cut back on pre-existing state authority outside the [Commission's] jurisdiction," *id.* at 209–10, and that Section 2021 did "not attempt to regulate materials which the [Commission] does not now regulate under the Atomic Energy Act of 1954." S. Rep. No. 86-870, at 4 (1959); accord H.R. Rep. No. 86-1125, at 4 (1959) (same). Instead, the 1959 Act "provide[d] a statutory framework within which the States [could] *assume* an independent regulatory role in extensive areas *now occupied by* the Atomic Energy Commission."[2] In particular, Section 2021(k) was "intended to make clear that the bill [did] not impair the State authority to regulate activities *of [Commission] licensees* for the manifold health, safety, and economic purposes other than radiation prevention." S. Rep. No. 86-870, at 12 (1959) (emphasis added); accord H.R. Rep. No. 86-1125, at 12 (1959) (same).

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[2] *Federal-State Relationship in the Atomic Energy Field: Hearings Before the J. Comm. on Atomic Energy*, 86th Cong. 290 (1959) (*1959 Hearings*) (statement of John S. Graham, Comm'r, Atomic Energy Comm'n) (emphasis added).

d. Over the last six decades, federal regulators have repeatedly acknowledged that they lack the authority to regulate uranium mining on private land. In 1959, two Commission representatives testified before Congress that "[t]he Commission does not have regulatory jurisdiction . . . over the mining of uranium."[3] In a 1978 adjudication, the Commission acknowledged that its "authority over uranium ore and other 'source material' attaches only '*after* removal from its place of deposit in nature,' and not when the ore is mined." *In re Rochester Gas & Elec. Corp.*, 8 N.R.C. 551, 554 n.7 (1978). In 2006, the Commission issued an opinion emphasizing that it "does not regulate conventional uranium mining," stating that the Commission "begins its oversight at the mill, rather than at the mine" and that "[c]onventional mining is controlled by other regulatory authorities"—that is, by States. *In re Hydro Res.*, 63 N.R.C. 510, 512–13 (2006) (discussing how "[t]he State of New Mexico . . . regulates conventional uranium mining within the state"); accord U.S. Br. 14 (acknowledging that "uranium mining . . . is outside [the Commission's] jurisdiction"); *id.* at 4 n.2, 22 (same).

2. Until the late 1970s, no one knew there were substantial uranium deposits in Virginia. That changed, however, when deposits were discovered in various locations throughout Virginia, including in Pittsylvania County. Pet. App. 5a, 216a. Following that discovery,

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[3] See *1959 Hearings* 83 (statement of H.L. Price, Dir., Div. of Licensing & Regulation, Atomic Energy Comm'n); see *id.* at 60 ("the Commission . . . does not regulate mining") (statement of Robert Lowenstein, Ofc. of Gen. Counsel, Atomic Energy Comm'n).

the Virginia General Assembly directed the Coal and Energy Commission (state energy commission) "to evaluate the environmental effects of uranium exploration, mining, and milling which may be expected to occur in the Commonwealth and any possible detriments to the health, safety, and welfare of Virginia citizens which may result from uranium exploration, mining or milling." 1981 Va. Acts 1404 ¶ 5 (Pet. App. 170a).

In 1982, the General Assembly enacted legislation permitting uranium exploration but imposing a one-year ban on uranium mining. 1982 Va. Acts 426 (Pet. App. 170a–77a); see § 45.1-283 (Pet. App. 176a) (providing that "permit applications for uranium mining shall not be accepted by any agency of the Commonwealth prior to July 1, 1983"). In the text of that legislation, the General Assembly recognized that "[t]he mining of uranium within the Commonwealth has the potential to provide its citizens with employment opportunities and other economic benefits." § 45.1-272, ¶ 1 (Pet. App. 170a–71a). At the same time, the General Assembly also noted "that the improper and unregulated exploration for uranium can adversely affect the health, safety, and general welfare of the citizens of this Commonwealth" and that "additional statutes . . . may be necessary in order to assure that any uranium mining and milling which may occur in the Commonwealth will not adversely affect the environment or public health and safety." § 45.1-272, ¶¶ 2 & 3 (Pet. App. 171a).

In 1983, the General Assembly extended the moratorium indefinitely by amending the 1982 legislation to provide that no permits shall be issued "until a program for permitting uranium mining is established by statute." 1983 Va. Acts 3, art. 1 (Pet. App. 177a–78a) (codified at Va. Code § 45.1-283). In the text of that legislation, the General Assembly reaffirmed that although "uranium mining and milling activity can generate substantial benefits, it also raises a wide range of environmental and other local concerns." Art. 2, § 45.1-285.1 (Pet. App. 178a). While emphasizing that a preliminary study "ha[d] not identified any environmental or public health concern that could preclude uranium development in Virginia," the General Assembly also found "that a possibility exists that certain impacts of uranium development activity may reduce or potentially limit certain uses of Virginia environment and resources, and that therefore additional evaluation of the costs and benefits of such activity is necessary before a final decision can be made regarding its acceptability." *Id.* (Pet. App. 178a).

To that end, the 1983 legislation created a Uranium Administrative Group (working group or group) and charged it with presenting a report to the state energy commission analyzing "the costs and benefits of permitting uranium development at [a] specific site," "the advantages and disadvantages of enacting legislation under which permits could be issued for uranium milling and mining," and "the advantages and disadvantages of seeking agreement with the federal government providing for discontinuance of the federal

government's responsibility for regulating uranium milling and tailings management." § 45.1-285.5(C)(1), (2), and (4) (Pet. App. 181a–82a).

In 1985, the state energy commission presented a report to Virginia's Governor and General Assembly. JA 119–34. By a 12-8 vote, the state energy commission adopted the working group's recommendation that "the moratorium on uranium development can be lifted" but only if "essential specific recommendations derived from the work of the [working group] are enacted into law." JA 124 (emphasis removed); see JA 122 (vote tally). In particular, the working group recommended that Virginia should "become an agreement state with the right to license a uranium development facility," that "a specific statute appropriate for the regulation of uranium mining should be enacted," and "that the state's current nondegradation standard with respect to water should be clearly affirmed and made applicable to uranium development." JA 125–26. The report also included separate statements from 10 of the working group's 18 members, 2 of whom dissented from the group's report and recommendations. JA 129–52.

"Despite the [state energy commission's] recommendation, the General Assembly did not move to lift the moratorium." Pet. App. 5a–6a; accord Pet. App. 221a (acknowledging that a bill proposing to lift the moratorium was "withdrawn" in 1986).

3. Petitioners are four companies formed or controlled by people who have owned the land containing Virginia's uranium reserves "for generations." Pet. C.A.

Br. 2; see Pet. App. 196a–98a, 201a (listing plaintiffs). As petitioners have repeatedly acknowledged, they made no effort to overturn Virginia's ban on uranium mining for more than two decades. See Pet. Br. 18. Then, after the price of uranium increased in the mid-2000s, petitioners "engage[d] the political process, urging [Virginia] lawmakers to reconsider the ban on uranium mining." *Id.*[4]

Having been unsuccessful in their efforts to lobby the Virginia legislature, petitioners turned to the courts. In August 2015—more than 33 years after Virginia first imposed a moratorium on uranium mining and more than 32 years after that moratorium was extended indefinitely—petitioners filed suit in federal court, claiming that Virginia's law had been preempted all along. Pet. App. 190a–238a. As relief, petitioners requested an injunction directing respondents (various state officials sued in their official capacities) "to ignore that invalid state statute and accept and process Virginia Uranium's permit and license applications in the same manner they would an application relating to any other natural mineral resource." Pet. App. 193a.

4. Respondents moved to dismiss petitioners' complaint under Federal Rule of Civil Procedure 12(b)(6). The district court granted that motion and

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[4] Although petitioners state that Virginia "reconsidered" its then-longstanding policies regarding uranium mining "during the period from 2008 to 2013," Pet. Br. 15, no such legislation has come to a vote in either chamber of the Virginia General Assembly from 1983 to the present. Pet. App. 229a (stating that a proposal to repeal the moratorium was "withdrawn" in 2013). As a result, the only state laws at issue here were enacted in 1982 and 1983.

denied petitioners' motion for summary judgment as moot. Pet. App. 53a–82a.

The court began with petitioners' field-preemption argument. Pet. App. 62a–80a. Emphasizing that one "must know the boundaries of th[e] field" involved, *id.* at 63a (quoting, *inter alia*, *De Canas* v. *Bica*, 424 U.S. 351, 360 n.8 (1976)), the district court concluded that the preempted field did not include conventional uranium mining on private land, thus leaving intact the Commonwealth's status as "the paramount proprietor[] over its mineral lands." *Id.* at 66a, 68a (internal quotation marks and citation omitted). The court acknowledged petitioners' allegations "that the General Assembly impermissibly premised Va. Code Ann. § 45.1-1283 on radiological safety concerns," but it rejected the view that federal law bars States from regulating "*any* activity with the intent to protect against radiation hazards unless by agreement with the [Commission]." *Id.* at 68a–69a.

The district court also rejected petitioners' obstacle-preemption argument. Pet. App. 80a–82a. Although "Congress has broadly stated a policy promoting atomic energy," the court explained that Congress "has evinced no purpose or objective that nonfederal uranium deposits be conventionally mined." Pet. App. 81a. The court also noted that "[s]hould the [Commission] wish that a nonfederal uranium deposit be conventionally mined," *id.* at 81a n.20, it may invoke its authority "to purchase, take, requisition, condemn, or otherwise acquire" "any interest in real property" and "rights to enter upon any real property" first to look for and then

to obtain any necessary uranium. 42 U.S.C. § 2096(a), (b), and (c).

5. The court of appeals "agree[d] with the district court that federal law does not preempt state regulation of conventional uranium mining" and thus affirmed. Pet. App. 4a.

a. The court of appeals first rejected petitioners' assertion "that conventional uranium mining is an 'activity' under [42 U.S.C. §] 2021(k)," Pet. App. 8a, explaining that provision only comes into play when "a state purports to regulate an activity that is also regulated by" the Atomic Energy Act, *id.* at 9a. The court noted that, under petitioners' "more expansive reading of Section 2021(k)'s preemptive reach," neither States nor the Federal Government could regulate conventional uranium mining, a result "[t]hat cannot be the law." *Id.* at 13a. The court acknowledged that "uranium millings and tailings storage are 'activities' . . . regulated by the" Commission. *Id.* But the court emphasized that "the plain language of the Commonwealth's ban does not mention uranium milling or tailings storage," *id.* at 14a, and it noted that petitioners did not "allege that the Virginia legislature acted with discriminatory intent," *id.* at 15a. Under those circumstances, the court of appeals "adhere[d] to the edict that courts 'will not strike down an otherwise constitutional statute on the basis of an alleged illicit legislative motive,'" emphasizing that, under federal law, the Commonwealth "was plainly allowed" to regulate uranium mining, including by banning it altogether. *Id.* (quoting *United States* v. *O'Brien*, 391 U.S. 367, 383

(1968)). The court of appeals also rejected petitioners' obstacle-preemption argument. *Id.* at 18a–19a.

b. Judge Traxler dissented. Pet. App. 20a–52a. He acknowledged that federal law preempts only "activities the [Atomic Energy] Act regulates," *id.* at 20, and that "the *substance* of Virginia's law . . . does not conflict with the Act, which does not regulate conventional mining on nonfederal lands," *id.* at 39a. Judge Traxler, however, understood this Court's decision in *Pacific Gas* as establishing that "a statute's *purpose* can itself bring the statute within the prohibited field," *id.*, and he understood respondents as having "*concede[d]* the truth of [petitioners'] allegation that the moratorium is grounded on the Virginia legislature's concerns regarding the radiological safety of uranium ore milling and tailings storage," "two activities [that] are regulated under the Act," *id.* at 40a–41a. Judge Traxler also concluded that conflict preemption applied because "Virginia has interfered with Congress's chosen method of uranium development." *Id.* at 49a.

SUMMARY OF ARGUMENT

There is no basis for concluding that Virginia's three-decades-old statute prohibiting uranium mining within its borders is preempted by a federal statute that does not begin to regulate uranium until "*after* its removal from its place of deposit in nature." 42 U.S.C. § 2092 (emphasis added).

A. Petitioners' field-preemption argument fails. "There is no federal pre-emption *in vacuo*" and petitioners have not identified any "enacted statutory text"

that brings regulation of conventional uranium mining into the preempted field. *Puerto Rico Dep't of Consumer Affairs* v. *Isla Petroleum Corp.*, 485 U.S. 495, 501, 503 (1988).

Although they repeatedly reference 42 U.S.C. § 2021(k), petitioners never actually assert that provision is what preempts Virginia Code § 45.1-283. The reason is obvious. Section 2021(k) does not preempt anything, nor does it address matters (like state regulation of uranium mining) that have never been brought within federal regulatory authority. To the contrary: Section 2021(k) cautions courts *against* drawing any preemptive inference from provisions of the 1959 Act that gave States a new mechanism for obtaining regulatory authority over certain matters that previously had been the exclusive province of the Federal Government.

Petitioners build nearly their entire case around three carefully edited sentences from two decisions of this Court: two sentences from *Pacific Gas & Electric Co.* v. *State Energy Resources Conservation & Development Commission*, 461 U.S. 190 (1983); and one sentence from *English* v. *General Electric Co.*, 496 U.S. 72 (1990). Yet petitioners repeatedly shear important language from all three sentences and omit other language that confirms the more qualified nature of the points the Court was making. Petitioners' argument also cannot be squared with the actual holdings of those cases, both of which unanimously rejected preemption challenges to state laws addressing

matters far closer to the heart of exclusive federal authority under the Atomic Energy Act than this one.

Even if the purpose of Virginia's law were relevant to answering the preemption question here (and it is not), petitioners are mistaken both about how purpose analysis works in the preemption context and what we have and have not "conceded." The materials on which petitioners rely—including quotations from newspaper articles written more than a quarter of a century after the enactment of the only Virginia statute being challenged—confirm this Court's previous warning that making preemption decisions turn "on the subjective intentions of the state legislature is an enterprise destined to produce 'confusion worse confounded.'" *Shady Grove Orthopedic Associates, P.A.* v. *Allstate Insurance Co.*, 559 U.S. 393, 404 (2010) (citation omitted). And, as we pointed out at the cert stage, "we have *never* conceded that legislative purpose is purely a question of fact (historical or otherwise)" or "that the Virginia legislature's *sole* purpose in imposing a moratorium on conventional uranium mining was based on radiological safety concerns associated with uranium milling and tailings." Resp. Supp. Cert. Br. 6–7.

B. The Court should also reject petitioners' abbreviated obstacle-preemption argument. Congress has never sought to reduce or limit a State's inherent power to regulate uranium mining within its borders. Quite the contrary. Each iteration of the Atomic Energy Act has been careful to preserve the principle that federal regulatory concern does not begin until "*after* [uranium's] removal from its place of deposit in nature." 42 U.S.C. § 2092 (emphasis added); see S. Rep.

No. 79-1211, at 18 (1946) ("source materials in their natural state are not capable of dangerous misuse"). Indeed, the unmistakable trend since 1946 has been to *increase* the States' role in the development and regulation of nuclear energy.

ARGUMENT

"[B]oth the Federal Government and the States wield sovereign powers." *Murphy* v. *National Collegiate Athletic Ass'n*, 138 S. Ct. 1461, 1475 (2018). Valid federal statutes are, of course, "the supreme Law of the Land . . . any Thing in the Constitution or Laws of any State to the Contrary notwithstanding." U.S. Const. art. VI, cl. 2. But preemption analysis "start[s] with the assumption that the historic police powers of the States were not to be superseded by the Federal Act unless that was the clear and manifest purpose of Congress." *Wyeth* v. *Levine*, 555 U.S. 555, 565 (2009) (quotation marks and citation omitted).

That assumption stands unrebutted here. It is common ground that this is not an express preemption case. See *Oneok, Inc.* v. *Learjet, Inc.*, 135 S. Ct. 1591, 1595 (2015) (noting that express preemption requires "express language in a statute"). There is no field preemption because the "enacted statutory text," *Puerto Rico Dep't of Consumer Affairs* v. *Isla Petroleum Corp.*, 485 U.S. 495, 501 (1988) (*Isla Petroleum*), reveals no purpose to preempt state laws regulating matters over which the Commission lacks regulatory authority. And there is no obstacle preemption because the history of the Atomic Energy Act reveals a deliberate

decision *not* to preempt state regulation of uranium mining.

I. A State's preexisting authority to regulate mining within its borders does not fall within the preempted field

"Every Act of Congress occupies some field." *De Canas* v. *Bica*, 424 U.S. 351, 360 n.8 (1976) (citation omitted). Accordingly, the first step of field-preemption analysis is to identify the specific "*area*" or "*field*" in which Congress "intended to foreclose any state regulation." *Oneok*, 135 S. Ct. at 1595 (internal quotation marks and citation omitted).

The "presumption against pre-emption of state police power regulations," *Cipollone* v. *Liggett Group*, 505 U.S. 504, 518 (1992), applies not only to the "question whether Congress intended any pre-emption at all" but also "to questions concerning the *scope* of its intended invalidation of state law." *Medtronic, Inc.* v. *Lohn*, 518 U.S. 470, 485 (1996). And just as "[t]he common law is not a brooding omnipresence in the sky," *Southern Pac. Co.* v. *Jensson*, 244 U.S. 205, 222 (1917) (Holmes, J., dissenting), "[t]here is no federal pre-emption *in vacuo*, without a constitutional text or a federal statute to assert it." *Isla Petroleum*, 485 U.S. at 503.

Petitioners are remarkably coy in identifying the "enacted statutory text," *Isla Petroleum*, 485 U.S. at 501, they believe preempts Virginia Code § 45.1-283. At times, petitioners gesture at 42 U.S.C. § 2021 (Section 2021) in its entirety. At others, petitioners focus on Section 2021(k). Elsewhere, petitioners claim that

preemption is dictated by this Court's previous decisions. And, finally, petitioners fall back on a "concession" they insist we made. None of petitioners' arguments establish that the preempted field encompasses state regulation of uranium mining.

A. Section 2021 as a whole has nothing to do with—and does not preempt—state regulation of uranium mining

The bulk of petitioners' brief suggests that Section 2021 as a whole does the preemptive work. But Section 2021 is, by itself, longer than many federal statutes, with 15 subsections spanning nearly four complete double-columned and single-spaced pages in the printed version of the United States Code. See 42 U.S.C. § 2021. Just like there can be no preemption by "congressional intent in a vacuum," *Isla Petroleum*, 485 U.S. at 501, there can be no preemption by pointing to 2,571 words of headings and text and saying "it's in there somewhere." See *Wisconsin Pub. Intervenor* v. *Mortier*, 501 U.S. 597, 612 (1991) ("field pre-emption cannot be inferred")

At any rate, none of Section 2021's provisions address state regulation of uranium mining. Although the presumption against preemption "does not rely on the absence of federal regulation" in a given area, *Wyeth*, 555 U.S. at 565 n.3, it is surely significant that Congress has *never* elected to regulate conventional uranium mining itself or to limit or disable the States' inherent authority to do so. See *Murphy*, 138 S. Ct. at 1480 (noting that Congress may grant private parties

"a federal right to engage in certain conduct subject only to certain (federal) constraints").

To the contrary, the Atomic Energy Act itself has long been careful to provide—and federal regulators have repeatedly recognized—that the zone of federal concern does not even commence until "*after* [uranium's] removal from its place of deposit in nature." 42 U.S.C. § 2092 (emphasis added); see S. Rep. No. 79-1211, at 18 (1946) (noting that "source materials in their natural state are not capable of dangerous misuse"); pages 6–9, *supra*. It would be more than a bit strange to find field preemption over an area that Congress has specifically declined to regulate in the very statute at issue. Cf. *Bonito Boats, Inc.* v. *Thunder Craft Boats, Inc.*, 489 U.S. 141, 166–67 (1989) (explaining that "[t]he case for federal pre-emption is particularly weak where Congress has indicated its awareness of the operation of state law in a field of federal interest, and has nonetheless decided to 'stand by both concepts and to tolerate whatever tension there [is] between them'" (internal citation omitted)).

B. Section 2021(k) does not preempt anything

Although it is cited 12 times in their brief, petitioners never actually come out and say that Section 2021(k) is what preempts Virginia Code § 45.1-283. Cf. U.S. Br. 13 (asserting without further elaboration that a "purpose-based approach to field preemption in this sphere is rooted in the text of Section 2021(k)"). But the most likely explanation for that glaring omission is

not hard to discern. As its text makes clear, Section 2021(k) is not a preemption clause at all. Rather, Section 2021(k) preserves state authority by directing courts not to draw preemptive inferences from the rest of Section 2021.

Section 2021(k) reads, in its entirety: "Nothing in this section shall be construed to affect the authority of any State or local agency to regulate activities for purposes other than protection against radiation hazards." 42 U.S.C. § 2021(k). That language establishes no federal standards that could conflict with state law. Nor does it disable States from acting in any particular area.

Instead, Section 2021(k) is addressed to courts. And its message is straightforward: We understand that Section 2021 creates a mechanism by which States may obtain authority that they previously lacked—that is, the "*discontinuance* of certain of the Commission's regulatory responsibilities . . . and the *assumption thereof* by the States," 42 U.S.C. § 2021(a)(4) (emphasis added). But even though those provisions provide that States availing themselves of that opportunity *gain* the ability to regulate formerly Commission-regulated materials "for the protection of the public health and safety from radiation hazards," § 2021(b), do not infer that States declining the offer are now *barred* from regulating those same "activities for purposes *other than* protection against radiation hazards," § 2021(k) (emphasis added). Quite the opposite of a roving preemption machine, Section 2021(k) simply emphasizes that Section 2021 does not alter

preexisting State authority over federally regulated activities even absent an agreement between a given State and the Commission.

Section 2021(k) thus functions like the Eleventh Amendment, which uses similar "shall not be construed" language. See U.S. Const. amend. XI ("The Judicial power of the United States shall not be construed to extend to any suit in law or equity, commenced or prosecuted against one of the United States by Citizens of another State, or by Citizens or Subjects of any Foreign State."). As this Court has explained, the Eleventh Amendment is neither the origin nor the source of a State's constitutionally protected sovereign immunity. Rather, "the adopted text addressed the proper interpretation of" the words "Judicial power" in "the original Constitution." *Alden* v. *Maine*, 527 U.S. 706, 722 (1999); accord *Hans* v. *Louisiana*, 134 U.S. 1, 11 (1890) (noting that the Eleventh Amendment "did not in terms prohibit suits by individuals against the States"). Indeed, nearly all of this Court's modern sovereign immunity jurisprudence—which recognizes States' immunity from a variety of suits not covered by the text of the Eleventh Amendment—is based on that fundamental distinction. See *Alden*, 527 U.S. at 728 (explaining that such decisions "reflect a settled doctrinal understanding . . . that sovereign immunity derives not from the Eleventh Amendment but from the structure of the original Constitution itself").

The same is true here. Virginia's authority to regulate conventional uranium mining—a physically intrusive and inherently destructive activity with

lasting consequences for the Commonwealth's lands and citizens—"neither derives from, nor is limited by" Section 2021(k). *Alden*, 527 U.S. at 713. Instead, Virginia's power to regulate such activities within its borders "is a fundamental aspect of the sovereignty which [Virginia] enjoyed before the ratification of the Constitution and which [it] retain[s] today" unless those powers have been "altered by" either the Federal Constitution or a valid federal law. *Id.* And for the reasons already explained, Section 2021(k) makes no such alteration.

A simple example reinforces the point. Imagine that a 16-year-old has for many years been walking to school with her friends. When she gets her driver's license, her parents establish rules governing use of the family car, including a prohibition against using it to drive her friends. No one would understand those new rules about use of the car—including the prohibition against driving friends—as creating a totally new prohibition on walking to school with her friends.

Yet that extreme reading is essentially what any argument based on Section 2021(k) is claiming here. Before Section 2021 was enacted in 1959, federal law generally barred States from regulating uranium once it was out of the ground, but left the States' preexisting authority to regulate conventional mining (including uranium mining) untouched. Then, through Section 2021, Congress *expanded* State authority by creating a mechanism for interested States to gain the ability to regulate some post-extraction activities, see 42 U.S.C. § 2021(b), subject to numerous conditions and federal

oversight, see, *e.g.*, §§ 2021(b), (j) & (o). Congress further emphasized that "[n]othing in" that *new* statutory "section shall be construed to affect" *any* States' "authority . . . to regulate activities for purposes other than protection against radiation hazards." § 2021(k) (emphasis added). But just like the example with the daughter and the car, there is no basis for reading Section 2021(k) as imposing any new and freestanding additional restrictions on State authority—much less restrictions on States' ability to regulate matters (here, mining) for which their sovereign authority has never been limited in the first place. Accord S. Rep. No. 86-870, at 12 (1959) (stating that Section 2021(k) was "intended to make it clear that the bill does not impair the State authority to regulate activities *of [Commission] licensees* for the manifold health, safety, and economic purposes other than radiation protection" (emphasis added)).[5]

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[5] At various points, petitioners seem to identify 42 U.S.C. § 2021(b) (Pet. App. 91a–92a) as another possible textual hook. See Pet. Br. 2, 32–33. But, like Section 2021(k), that provision does not purport to take away authority that States have always had. Instead, Section 2021(b) grants States that enter into agreements with the Commission a *new* power to regulate matters that otherwise would lie within exclusive federal jurisdiction. This distinction is critical, because it destroys the predicate for petitioners' reliance on the maxim *expressio unius est exclusio alterius*. The relevant "exclusion" here is Congress's repeated decision—in the text of the statute—to disclaim federal authority over uranium until "*after* its removal from its place of deposit in nature." 42 U.S.C. § 2092 (emphasis added).

C. Petitioners repeatedly omit key language from both *Pacific Gas* and *English* that confirms the limited scope of the preempted field

Lacking any support in the "enacted statutory text," *Isla Petroleum*, 485 U.S. at 501, petitioners seek to hang their field-preemption argument almost entirely on three sentences from two decisions of this Court: two sentences from *Pacific Gas & Electric Co.* v. *State Energy Resources Conservation & Development Commission*, 461 U.S. 190, 209–10 (1983) (*Pacific Gas*); and one sentence from *English* v. *General Elec. Co.*, 496 U.S. 72 (1990). Neither case supports petitioners' argument.

1. In *Pacific Gas*, the Court unanimously rejected a preemption challenge to a state law that imposed a moratorium on the certification of new nuclear reactors until a state energy commission certified the existence of adequate nuclear waste facilities. 461 U.S. at 198, 200, 203. In *English*, the Court held, once again unanimously, that federal law did not preempt a common law intentional-infliction-of-emotional-distress claim brought by an employee of a nuclear-fuels production facility who claimed she was fired "in retaliation for the employee's nuclear-safety complaints." 496 U.S. at 74, 85. Those cases both involved matters far closer to the heartland of federal concern under the Atomic Energy Act than this one, which would make this case an especially odd vehicle for this Court's first preemption holding under the sort of theory urged here.

2. More than 70 years ago, this Court "remind[ed] counsel that words of our opinions are to be read in light of the facts of the case under discussion." *Armour & Co.* v. *Wantock*, 323 U.S. 126, 132–33 (1944). Yet petitioners' arguments based on *Pacific Gas* and *English* are predicated on—and, indeed, require—omitting key language from the very sentences on which petitioners rely.

a. The first pertinent sentence from *Pacific Gas* reads, in its entirety:

> A state moratorium on nuclear construction grounded in safety concerns falls squarely within the prohibited field.

461 U.S. at 213.

Despite quoting language from that one sentence 12 times in their opening brief, petitioners reproduce the full sentence only once, where it appears embedded inside an 82-word block quote. Pet. Br. 37–38. In contrast, the other eleven uses all omit the sentence's first six words: "A state moratorium on nuclear construction. . . ." See, *e.g.*, Pet. Br. 31 ("as this Court held over three decades ago, a State law 'grounded in [radiological] safety concerns falls squarely within the prohibited field'"); accord *id.* at i, 2, 3, 5, 27, 30, 31, 38, 40, 41 (same).

But those carefully excised words are critical because, unlike uranium mining, "nuclear construction" has always been a matter of intense federal concern and regulation. Such construction was under "a federal monopoly" until 1954, *Pacific Gas*, 461 U.S. at 206, and

even since then, federal regulators have been charged with "strict supervision" of all "private construction, ownership, and operation of commercial nuclear power reactors." *Duke Power*, 438 U.S. at 63; see *Power Reactor Dev. Co.* v. *International Union of Elec., Radio & Mach. Workers*, 367 U.S. 396, 404–07 (1961) (describing various statutes and regulations that give the Commission authority over nuclear power plants). For that reason, the Court was on solid ground when it said that: "A state moratorium on nuclear construction grounded in safety concerns falls squarely within the prohibited field." *Pacific Gas*, 461 U.S. at 213. But none of that has anything to do with the issue here, which involves a state moratorium on an activity that has never even been regulated (much less entirely occupied) by federal law.[6]

b. The other sentence from *Pacific Gas* on which petitioners rely reads, in its entirety:

> Rather, the Federal Government has occupied the entire field of nuclear safety concerns,

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[6] On page 2 of their brief, petitioners attempt a similar sleight of hand with language that appears three sentences later in *Pacific Gas*. That sentence reads: "*That being the case*, it is necessary to determine whether there is a non-safety rationale for [Cal. Pub. Res. Code Ann.] § 25524.2." *Pacific Gas*, 461 U.S. at 213 (emphasis added). As the preceding three sentences make clear, that language was building off the Court's earlier observation that "[a] state moratorium on nuclear construction grounded in safety reasons" would fall within the preempted field. *Id.* Contrary to petitioners' careful editing, that sentence states no general rule that it is always "necessary to determine [the] . . . rationale," Pet. Br. 2, for *any* challenged state law.

> except the limited powers expressly ceded to the States.

461 U.S. at 212.

Here too, petitioners quote the full sentence only once, as part of that same 82-word block quote. See Pet. Br. 37–38. The other six times the sentence appears, petitioners have removed both the first word ("Rather") and the last nine ("except the limited powers expressly ceded to the States"). See, *e.g.*, Pet. Br. 29 ("By these actions, as this Court held in its foundational *PG&E* decision, the federal government 'occupied the entire field of nuclear safety concerns.'"); accord *id.* at i, 1, 26, 39, 54 (same).

But, once again, the omitted words are critical. The word "rather" underscores that the Court was responding to the specific argument it had summarized just three sentences earlier—California's contention "that although safety regulation of nuclear power plants by States is forbidden, a State may completely prohibit *new construction* until its safety concerns are satisfied by the Federal Government." *Pacific Gas*, 461 U.S. at 212 (emphasis added). As explained above, we have no quarrel with the view that, when it comes to construction of nuclear power plants, "the Federal Government has occupied the entire field of nuclear safety concerns." *Pacific Gas*, 461 U.S. at 212. But, again, that is irrelevant to the issue here.

The sentence's last nine words—"except the limited powers expressly *ceded to* the States," *Pacific Gas*, 461 U.S. at 212 (emphasis added)—further underscore the qualified nature of the point the Court was making.

The power to regulate mining within its borders is not something that Congress has "ceded to" Virginia. Rather, it is a power that Virginia has always had, a power the Federal Government has never assumed, and thus a power there never would have been any occasion to "cede" back. (In contrast, the sentence from *Pacific Gas* on which petitioners rely is immediately followed by a footnote in which the Court identifies three federal statutes that "specifically authorize[ ]" the States to take certain actions regarding nuclear power plants. *Pacific Gas*, 461 U.S. at 212 n.25.)

c. Petitioners' reliance on *English* fares no better. The sentence from that decision on which petitioners rely reads, in its entirety:

> In other words, the Court defined the preempted field, in part, by reference to the motivation behind the state law.

English, 496 U.S. at 84. Saying that a particular type of "motivation" is sometimes necessary before preemption will be found is not, of course, the same as saying it is invariably sufficient. But that is precisely the logical leap petitioners ask this Court to take.

As with *Pacific Gas*, moreover, both the sentence itself and the surrounding context confirm that petitioners are overreading it. Despite quoting portions of that one sentence from *English* six times throughout their brief, petitioners *never once* include the first five words: "In other words, the Court . . . " *English*, 496 U.S. at 84. See Pet. Br. i, 2, 4, 26, 39, 46. But, as those carefully omitted words make clear, the ones that follow are simply a restatement of the previous sentence.

And, as was true with *Pacific Gas*, the previous sentence makes clear that petitioners are stretching the Court's point far beyond its limited context: "Indeed, the majority of the Court [in *Pacific Gas*] suggested that a 'state moratorium *on nuclear construction* grounded in safety concerns falls squarely within the prohibited field.'" *English*, 496 U.S. at 84 (emphasis added) (quoting *Pacific Gas*, 461 U.S. at 213).[7]

3. Petitioners' discussion of *Pacific Gas* also omits language that affirmatively undermines their argument that the 1959 Act—which first enacted Section 2021—brought state regulation of uranium mining into the preempted field. As *Pacific Gas* explained,

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[7] Petitioners also omit language from *English* that threatens to cut the legs out from under their entire theory of the case. In *English*, this Court specifically flagged—and specifically declined to decide—"[w]hether the suggestion of the majority in *Pacific Gas* that legislative purpose is relevant to the definition of the pre-empted field is part of the holding of that case." 496 U.S. at 84 n.7.

As in *English*, it is unnecessary to decide here whether some of the language in *Pacific Gas* was dictum because Virginia's 35-year-old decision not to license uranium mining within its borders escapes preemption either way. Were the Court to reach the question, however, we submit that Justices Blackmun and Stevens were right that the language on which petitioners rely was both "unnecessary to the Court's holding" and "wrong in several respects." *Pacific Gas*, 461 U.S. at 223–24 (Blackmun, J., concurring in part and concurring in the judgment); see *id.* at 224 (explaining that "Congress has occupied not the broader field of 'nuclear safety concerns,' but only the narrower area of *how* a nuclear plant should be constructed and operated to protect against radiation hazards" (emphasis added)). Such a conclusion would not impact the result of *Pacific Gas* or *English*, both of which unanimously rejected preemption challenges.

"the point of the 1959 Amendments was *to heighten* the States' role," and "Congress made clear that" even Section 2021(c)—which identified certain regulatory authority that "was exclusively for the Commission to exercise"—"was not intended to cut back on pre-existing state authority *outside* the [Commission's] jurisdiction." *Pacific Gas*, 461 U.S. at 209–10 (emphasis added); see *id.* at 222 (noting "the continued preservation of state regulation in traditional areas"). That language cannot be squared with petitioners' claim that the 1959 Act, *sub silentio*, imposed new limits on States' ability to regulate matters (here, mining) that have *always* fallen outside federal regulatory jurisdiction.

D. Neither allegations about the state legislature's subjective motivations nor claims about what respondents have conceded warrants a different result

The heart of petitioners' argument is that Virginia Code § 45.1-283 is preempted not because of what it *does* (forbid issuance of licenses to mine uranium) but rather because of *why* (petitioners claim) it was enacted. See, *e.g.*, Pet. Br. 40 (asserting that Virginia's law is preempted because it "is motivated by the purpose of protecting against the radiological hazards of uranium milling and the storage of uranium tailings").

That argument does not withstand scrutiny. For the reasons already explained above, the zone of federal preemption does not begin until "after [uranium's] removal from its place of deposit in nature." 42 U.S.C. § 2092; see Parts I(A), (B), & (C), *supra*. And even if petitioners were right that purpose mattered here, they

are wrong both about how courts should assess the "purpose" of an allegedly preempted state law and what we have (and have not) "conceded."

1. As we flagged at the cert stage, petitioners and the Federal Government repeatedly assume that determining the purpose of a challenged state law involves an issue of historical fact. See Resp. Supp. Cert. Br. 8. Even at the merits stage, petitioners and the Federal Government offer neither authority nor argument in support of that assumption. In any event, the assumption is wrong.

a. Petitioners have not identified any previous decision of this Court that treats the identification of a state law's purpose as one of historical fact. With the exception of claims of racial discrimination under the Equal Protection Clause (an issue discussed at pages 41–43, *infra*), neither have we.

i. Take, for example, this Court's three previous decisions involving preemption under the Atomic Energy Act. To be sure, *Pacific Gas* referenced this Court's "general practice [of] plac[ing] considerable confidence in the interpretations of state law reached by the federal courts of appeals." 461 U.S. at 214. But courts of appeals, of course, have no power to engage in fact-finding. And, more importantly, this Court never scrutinized the allegations of the challengers' complaint or the evidence they presented, much less suggested that the case might come down to factual findings by the district court. Instead, the Court treated the inquiry of "whether there [was] a nonsafety rationale for" the challenged law, *id.* at 213, as a fundamentally *legal*

question and even disclaimed any "attempt[] to ascertain California's true motive." *Id.* at 216.[8]

The same is true of this Court's other decisions involving the Atomic Energy Act. In *Silkwood* v. *Kerr-McGee Corp.*, 464 U.S. 238 (1984), the Court held that federal law did not preempt a state-law "award of punitive damages arising out of the escape of plutonium from a federally-licensed nuclear facility." *Id.* at 241. The Court never attempted to uncover Oklahoma's "motivation" for permitting punitive damages under such circumstances. Instead, the Court deemed it sufficient that "[p]unitive damages have long been part of traditional state tort law" and that the relevant federal materials revealed that "Congress assumed that state-law remedies, in whatever form they might take, were

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[8] There was ample evidence in *Pacific Gas* that could have supported a finding that radiological safety concerns were at least a motivating factor for the challenged California law. To give just one example, the petitioners' brief quoted an official opinion from California's attorney general stating that "the effect of these statutes is to assert California's regulatory authority over radiological hazards." Pet. Br. at 41, *Pacific Gas*, *supra*, No. 81-1945 (quoting 61 Op. Cal. Att'y Gen. 159, 166 (1978)); accord *id.* at 44–48 (citing additional evidence). Yet even though the district court had granted summary judgment to the challengers, see *Pacific Gas & Elec. Co.* v. *State Energy Res. Conservation & Dev. Comm'n*, 489 F. Supp. 699, 700 (E.D. Cal. 1980), this Court affirmed the court of appeals' decision holding that the challenged state laws "*are not preempted*" without remanding for any further proceedings. *Pacific Legal Found.* v. *State Energy Res. Conservation & Dev. Comm'n*, 659 F.2d 903, 910, 928 (9th Cir. 1981) (emphasis added); see *Pacific Gas*, 461 U.S. at 223 ("The judgment of the Court of Appeals is *Affirmed*.").

available to those injured by nuclear incidents." *Id.* at 255–56.

The Court's analysis in *English* was to the same effect. To be sure, the Court stated "that the state tort law at issue" in that case was "not motivated by safety concerns." 496 U.S. at 84. But, once again, the Court did not make that determination after poring over statements by state legislators or decisions of the relevant state courts. Instead, the *English* Court emphasized this Court's own previous identification of "a nonsafety *rationale*" for intentional infliction of emotional distress damages—namely, "the State's 'substantial interest in protecting its citizens from the kind of abuse of which [petitioner] complain[s].'" *Id.* at 83 (alterations in original; emphasis added) (quoting *Farmer* v. *Carpenters*, 430 U.S. 290, 302 (1977)). Cf. *Shady Grove Orthopedic Assocs., P.A.* v. *Allstate Ins. Co.*, 559 U.S. 393, 404–05 (2010) (explaining that, if preemption turned on "the subjective intentions of the state legislature," "[i]t is not even clear that a state supreme court's pronouncement of the law's purpose would settle the issue, since the existence of a factual predicate for avoiding federal pre-emption is ultimately a federal question").

ii. The same is true of the broader preemption and statutory interpretation contexts. Both areas, of course, involve attempts to determine the "purpose" of a given law in a general sense. See *Isla Petroleum*, 485 U.S. at 501 (noting this fact). But, in those broader contexts, too, we are aware of no decision of this Court treating the identification of that "purpose" as a matter

of historical fact under Federal Rule of Civil Procedure 12(b)(6)—much less for purposes of summary judgment under Rule 56 or clear-error review under Rule 52(a)(6).

The various decisions cited by the Federal Government and other amici, see U.S. Br. 28–30; Chamber of Commerce Amicus Br. 12–16, reinforce the point. In those cases, the challenged state laws were held preempted because of what they *did* rather than the motivations alleged to have produced them. See *National Meat Ass'n* v. *Harris*, 565 U.S. 452, 468 (2012) (noting that the challenged state law "endeavors to regulate the same thing [as federal law], at the same time, in the same place—except by imposing different requirements"); *Engine Manuf. Ass'n* v. *South Coast Air Quality Mgmt. Dist.*, 541 U.S. 246, 255 (2004) (concluding that "[a] command, accompanied by sanctions, that certain purchasers may buy only vehicles with particular emission standards is as much an 'attempt to enforce' a 'standard' as a command, accompanied by sanctions, that a certain percentage of a manufacturer's sales volume must consist of such vehicles").[9]

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[9] See also *Kindred Nursing Ctrs. Ltd. P'ship* v. *Clark*, 137 S. Ct. 1421, 1426 (2017) (referring to laws "disfavoring contracts that (oh so coincidentally) have *the defining features of* arbitration agreements" (emphasis added)); *Haywood* v. *Drown*, 556 U.S. 729, 740 (2009) ("having made the decision to create courts of general jurisdiction that regularly sit to entertain analogous suits, New York is not at liberty to *shut the courthouse door* to federal claims that it considers at odds with its local policy" (emphasis added)); *Northern Nat'l Gas Co.* v. *State Corp. Comm'n of Kansas*, 372 U.S. 84, 91 (1963) ("These state orders necessary *deal with* matters which directly affect the ability of the Federal Power Commission to regulate comprehensively. . . ." (emphasis added)).

Indeed, in *Rowe* v. *New Hampshire Motor Transp. Ass'n*, 552 U.S. 364 (2008), the Court expressly declined to plumb—much less base a decision on—"Maine's actual motivation for the laws at issue here." *Id.* at 374.

b. This Court's decision in *Shady Grove* has already canvassed the intractable problems with equating the purpose of a challenged law with "the subjective intentions of the state legislature." 559 U.S. at 404. This case simply underscores the point.

Different outcomes for identical state laws. The Federal Government acknowledges that "States retain the authority to regulate conventional uranium mining—or to prohibit it altogether" so long as "that regulation is grounded in concerns about mining itself, which is not subject to NRC regulation." U.S. Cert. Br. 16, 18. Thus, under petitioners' approach "one State's statute could survive pre-emption . . . while another State's identical law would not, merely because its authors had different aspirations." *Shady Grove*, 559 U.S. at 404.

The problem of multiple purposes. "The best evidence of . . . purpose is the statutory text." *West Va. Univ. Hosps.* v. *Casey*, 499 U.S. 83, 98 (1991). But here the text of the 1982 statute that imposed Virginia's original moratorium expressly identifies multiple "*purposes*" (plural in the original), including "encourag[ing] and promot[ing] the safe and efficient exploration for uranium resources within the Commonwealth" and "assur[ing] . . . that uranium mining and milling will be subject to statutes and regulations which protect the environment and the health and safety of the

public." 1982 Va. Acts 426, § 45.1-272, ¶ 4 (Pet. App. 171a) (emphasis added); see *Shady Grove*, 559 U.S. at 404 (noting that "[m]any laws further more than one aim").

The special challenges of determining state legislative motive. There is a reason one will search petitioners' brief in vain for references to the state-law equivalent of the *Congressional Record* or a federal House or Senate Report: No such sources exist in Virginia.[10] See *Shady Grove*, 559 U.S. at 405 (noting that "state legislative history . . . may be less easily obtained, less thorough, and less familiar than its federal counterpart").

The materials on which petitioners rely only underscore the problems with making preemption determinations turn on judicial efforts to discern the motivations of state legislatures. Take, for example, petitioners' heavy reliance on dissenting opinions filed by two unelected citizen members of the state working group that were (along with other materials) submitted to the Virginia General Assembly in 1985. See Pet. Br. 17–18. This Court has long emphasized that "[w]hat motivates one legislator to make a speech about a statute is not necessarily what motivates scores of others to enact it." *United States* v. *O'Brien*,

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[10] See Virginia Div. of Leg. Servs., Legislative Resource Center, Legislative History, http://dls.virginia.gov/lrc/leghist.htm ("legislative intent is not officially recorded in Virginia"); *A Guide to Legal Research in Virginia* 3.202(E), at 21 (8th ed. 2017) (Joyce Manna Janto, ed.) (stating that Virginia's *House Journal* and *Senate Journal* "do not contain committee reports, the text of bills, or floor debates").

391 U.S. 367, 384 (1968); accord *Pacific Gas*, 461 U.S. 216 (same). Yet petitioners seek to take things several steps further by quoting extensively from dissenting opinions from two *non-legislator* members of an 18-person working group and then seeking to attribute those views to *the Virginia legislature as a whole*. See also *Edwards* v. *Aguillard*, 482 U.S. 578, 636–37 (1987) (Scalia, J., dissenting) (noting the difficulties of "discerning the subjective motivation" of even a single legislator).

The other materials on which petitioners rely—what petitioners call "Public Statements by Members of Virginia's General Assembly Between 2009 and 2014," Pet. App. 239a—are no less suspect. This Court has described "[p]ost-enactment legislative history" as "a contradiction in terms" and "not a legitimate tool of statutory interpretation." *Bruesewitz* v. *Wyeth LLC*, 562 U.S. 223, 242 (2011). Yet petitioners ask this Court to rely on statements made between 2009 and 2014 in assessing the motivation behind a Virginia statute that last came to a vote in 1983. That is not how statutory interpretation works in any context. Cf. *Isla Petroleum*, 485 U.S. at 501 (disclaiming any attempt to identify "congressional intent in a vacuum, unrelated to the giving of meaning to an enacted statutory text").

The problems with this approach are well-illustrated by the very first "statement" on which petitioners rely: "Adams said he is against lifting the ban because there is no consensus that uranium mining can be done safely." Pet. App. 239a. Delegate Les Adams was elected to the Virginia General Assembly in

2013 and first seated in 2014, more than 30 years after Virginia Code § 45.1-283 was enacted.[11] The statement reproduced above—which does not purport to be a direct quotation from Adams—is contained in a newspaper article that was written when Adams was a candidate for office rather than a member of the General Assembly. Such materials do not even "qualify as legislative 'history' " in the first place. *Graham Cty. Soil & Water Conservation Dist.* v. *United States ex rel. Wilson*, 559 U.S. 280, 298 (2010). Cf. *Hamdan* v. *Rumsfeld*, 548 U.S. 557, 623 n.52 (2006) ("We have not heretofore, in evaluating the legality of executive action, deferred to comments made by [government] officials to the media.").

c. As they did below, petitioners seek to draw an analogy to this Court's cases governing intentional race discrimination. See Pet. Br. 43; see also *Hunter* v. *Underwood*, 471 U.S. 222, 229 (1985) (treating whether a provision of Alabama's 1901 constitution had a discriminatory purpose as a question of fact for purposes of clear-error review under Federal Rule of Civil Procedure 52(a)). One need look neither hard nor long, of course, to find examples where the constitutional commitment to eradicating our Nation's history of invidious racial discrimination has impacted the application of otherwise-controlling rules. See, *e.g.*, *Peña-Rodriguez* v. *Colorado*, 137 S. Ct. 855, 867 (2017) ("no-impeachment rule" for juries); *Virginia* v. *Black*, 538 U.S. 343, 363 (2003) (holding that a state may "outlaw cross

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[11] Virginia House of Delegates Member Listing, http://virginiageneralassembly.gov/house/members/members.php?id=h0252.

burnings done with the intent to intimidate"); *Shelley* v. *Kraemer*, 334 U.S. 1 (1948). This case, in contrast, involves the proper interpretation of a federal statute regulating purely economic matters.

At any rate, petitioners' proposed analogy to the constitutional law of race discrimination fails on its own terms. Even in that context, it is not enough simply to allege an impermissible purpose: the challenged law also must have a constitutionally significant effect. See *Palmer* v. *Thompson*, 403 U.S. 217, 225 (1971) (emphasizing the lack of authority for the view "that a legislative act may violate equal protection *solely* because of the motivations of the men who voted for it" (emphasis added)). As the Court has recognized, there also would be an "element of futility" to any motives-only analysis because the same law "would presumably be valid as soon as the legislature or relevant governing body repassed it for different reasons." *Id.*; accord *Pacific Gas*, 461 U.S. at 216 (making the same point).

All of that is true here too. Regardless of the precise reasons why various members of the Virginia General Assembly voted to impose a one-year moratorium on uranium mining in 1982 and then to extend that moratorium indefinitely in 1983, there has been no unequal treatment of similarly situated citizens or infringement on any federally guaranteed right. And were this Court to strike down Virginia's longstanding policy based on the perceived motives of some of its supporters, there would be nothing to prevent the General Assembly from reenacting precisely the same

policy on bases that were identified in the original statutory text and that are, even under petitioners' field-preemption theory, entirely permissible. See U.S. Cert. Br. 16, 18 (acknowledging that "States retain the authority to regulate conventional uranium mining—or to prohibit it altogether" so long as "that regulation is grounded in concerns about mining itself").

2. That leaves petitioners' repeated assertions that we have "conceded" that the 1983 Virginia law that forbids permits for uranium mining has a purpose that brings it within the preempted field. To reiterate: any such "concession" would be irrelevant here because a State's regulation of uranium mining simply does not fall within the preempted field. See Parts I(A), (B), & (C), *supra*. At any rate, petitioners' "concession" argument is also fatally flawed.

a. Petitioners are remarkably imprecise about what we have "conceded," claiming most often that we have acknowledged "that the ban is *motivated by* concerns" about milling and tailings. Pet. Br. 3 (emphasis added); accord *id.* at 15, 19, 24, 40 (same). But "[m]any laws further more than one aim," *Shady Grove*, 559 U.S. at 404, and saying a law was "motivated by" one concern is not the same as saying there were no other motivations, much less that there is no other purpose or "rationale" for the challenged law, *Pacific Gas*, 461 U.S. at 213. Indeed, the text of the 1983 legislation that rendered the moratorium permanent identified a risk that, on its face, has no inherent connection to radiological concerns about milling and tailings: the possibility "that certain impacts of uranium development

activity may reduce or potentially limit certain uses of Virginia environment and resources." 1983 Va. Acts 3, Art. 2 § 45.1-285.1 ¶ 2 (Pet. App. 178a); see § 45.1-285.1 ¶ 1 (Pet. App. 178a) (emphasizing that "a preliminary study . . . *has not* identified any environmental or public health concern that could preclude uranium development in Virginia" (emphasis added)).

b. Even petitioners' carefully selected excerpts reveal that we have never conceded—even for argument's sake—that the Virginia General Assembly's *sole* motivation in declining to license uranium mining was based on safety concerns about milling and tailings or that there is no "non-safety rationale" for banning such mining. *Pacific Gas*, 461 U.S. at 213; see Resp. Supp. Cert. Br. 6–7 (noting this point).

Petitioners first cite this sentence from the memorandum in support of our motion to dismiss: "Assuming for purposes of the current motion the Plaintiffs are correct, and *one of the purposes* behind enacting [Virginia Code] § 45.1-283 was to address radiological safety concerns, nothing in the [Atomic Energy Act] precludes such a consideration." JA 43–44 (emphasis added) (three footnotes omitted) (quoted in part at Pet. Br. 25). But "one of the purposes" is not the same thing as the sole purpose, and that reference to "radiological safety concerns" does not distinguish between potential concerns related to *milling* as opposed to *mining*.[12]

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[12] The footnotes accompanying the pertinent sentence also identify numerous reasons why such an assumption was neither relevant nor warranted. See JA 43 n.15 (emphasizing "that 'inquiry into legislative motive is often an unsatisfactory venture,'"

The same is true of our reply brief in support of our motion to dismiss. See Pet. Br. 25 (citing JA 211–13). There too we argued that the court "need not conduct a searching review of legislative motive" because "*regardless* of what Virginia may have considered in either passing or declining to overturn the current ban, the [Atomic Energy Act] does not reach uranium mining and the Commonwealth was entitled to exercise the entirety of its police powers in making such a determination." JA 211–13 (emphasis added) (footnotes omitted); see JA 212 nn.7 & 9 (reiterating the points discussed in note 12, *supra*).

To be sure, our Fourth Circuit brief stated that the extrinsic materials petitioners submitted in connection with their motion for summary judgment were "beside the point . . . because Rule 12(b)(6) required [respondents] to accept as true that Virginia enacted the moratorium based on radiological safety concerns." JA 216. As explained above, there is a critical difference between "based on" and "solely based on" and between "radiological safety concerns" and "radiological

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especially because "the Virginia General Assembly . . . does not regularly publish committee reports or similar documentation" (quoting *Pacific Gas*, 461 U.S. at 216)); JA 44 n.16 (noting that "[m]uch of what [petitioners] discuss in their lengthy narrative occurred after the enactment of the statute" and questioning the "[h]ow these post-hoc actions bear upon the decision to enact the statute"); JA 44 n.17 (explaining that "[t]he attachments to [petitioners'] Complaint fail to support their central tenet" and that the only laws actually enacted by the General Assembly "state that the study of uranium mining, and then the enactment of the moratorium, stem from . . . concerns about potential adverse effects upon the 'environment and the health and safety of the public'" (quoting Va. Code Ann. § 45.1-272 (1982)).

safety concerns arising from milling," and even that brief emphasized that respondents "did not (and do not) concede the truth of the hearsay in [the various] newspaper articles and other materials." JA 216 n.58. Even if that one sentence in our court of appeals brief could reasonably be construed as broader than others we have made—and it should not—this Court is not bound by a "concession" that was, by its terms, simply a legal opinion about the operation of the Federal Rules of Civil Procedure. See, *e.g.*, *Massachusetts* v. *United States*, 333 U.S. 611, 624 n.23 (1948) (stating that this Court is "not bound to accept" a "concession" about how to properly interpret a legal rule "as either sound or conclusive of the litigation. It is not, even in terms, a confession of error").[13]

c. Nor would judicial efficiency or the broader public interest be served by resolving this case based on a passing "concession" in lower-court briefing—especially when we made clear before this Court granted certiorari that we did not agree we made any such concession. See Resp. Supp. Cert. Br. 6 ("Because the point may prove critical were this Court to grant review, it is important to be clear about what we have and have not

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[13] Petitioners also assert that "[b]oth rulings below are . . . predicated on the assumption that Virginia's uranium ban is motivated by radiological safety concerns related to milling and tailings management." Pet. Br. 24. But "[i]t is well established that [a] respondent may defend the judgment of the Court of Appeals on any ground supported by the record," *Lewis* v. *Jeffers*, 497 U.S. 764, 786 n.3 (1990), and we made clear before this Court granted certiorari that we believed the court of appeals had overread the relevant "concession." See Resp. Supp. Cert. Br. 7 n.3.

'conceded.'").[14] Even in this particular case, any such concession would—at most—help petitioners defeat a motion to dismiss for failure to state a claim on which relief can be granted. See JA 43 ("Assuming for purposes of the current motion. . . ."); JA 216 (expressly referencing "Rule 12(b)(6)"). Respondents thus would not be bound by any such "concession" in further proceedings, including for purposes of a motion for summary judgment or a trial on the merits.

The Federal Government suggests that "this Court need not address what evidence would be necessary or sufficient to prove" petitioners' allegations of impermissible motive on remand. U.S. Br. 27 n.7. Such assurances would provide little comfort to the lower courts charged with hearing cases in which such motive is alleged and squarely denied. Or the state officials who would be required to litigate under a completely undefined "motive" standard. Or, most especially, the state legislators who would (barring further doctrinal elaborations) be required to contemplate the prospect of depositions about why they voted how they did on both enacted and failed proposals. See Resp. Supp. Cert. Br. 7 (explaining that the Federal Government's assurances "attempt to skate over several difficult questions about how analysis of legislative purpose works in this context"). Nor are these challenges off in the distance: they would arise immediately on remand in this very case.

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[14] Were the Court to conclude that it did not grant review to determine the existence or scope of any "concession," it should dismiss the writ of certiorari as improvidently granted.

3. Petitioners and their amici contend that refusing to base preemption determinations "on the subjective intentions of the state legislature," *Shady Grove*, 559 U.S. at 404, "would provide an easy roadmap for evasion of Congress's judgments regarding the State's carefully defined and limited role in this sphere." U.S. Br. 27. For reasons we have already explained, the single clearest judgment Congress made in this area is to leave undisturbed the States' status as "the 'paramount proprietor[] over [their] mineral lands" until after those minerals have been removed from the ground. Pet. App. 66a (internal quotation marks and citation omitted). There is thus no need for the Court to say anything here about States' ability to regulate (directly or indirectly) either nuclear power plants, see Entergy Amicus Br. 5–14, or "the storage and transportation of spent nuclear fuel," U.S. Br. 27—areas that were (unlike uranium mining) previously subject to a federal monopoly and remain subjects of pervasive federal regulation.

What is more, this Court has already considered and rejected this precise argument in *Pacific Gas*. Although the Court described similar arguments of "petitioners and the United States" in that case as having "considerable force," the Court emphasized that "the legal reality remains that Congress has left sufficient authority in the States to allow the development of nuclear power to be slowed or even stopped for economic reasons." *Pacific Gas*, 461 U.S. at 223. "Given this statutory scheme," the Court concluded, "it is for Congress to rethink the division of regulatory authority in light

of its possible exercise by the States to undercut a federal objective." *Id.* Such an approach would be far more respectful of "the dignity that is consistent with [the States'] status as sovereign entities," *Federal Maritime Comm'n* v. *South Carolina State Ports Auth.*, 535 U.S. 743, 760 (2002), than adopting a new and intrusive form of field preemption analysis based on concerns that "a State [may] misuse[ ]" the authority that both the Constitution and the Atomic Energy Act leave "in its hands." *Pacific Gas*, 461 U.S. at 216.

II. There is no basis for finding obstacle preemption

Petitioners' abbreviated conflict-preemption argument should be rejected for essentially the same reasons the Court rejected a similar argument in *Pacific Gas*. See 461 U.S. at 220–22.

A. "[C]onflict pre-emption exists where compliance with both state and federal laws is impossible, or where the state law stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress." *Oneok*, 135 S. Ct. at 1595 (internal quotation marks and citation omitted). There is no claim that the first strand of conflict preemption is present here. Badly as they may want to mine uranium in Virginia, petitioners do not contend federal law requires them to do so.

Nor is there any basis for finding obstacle preemption.[16] That form of preemption analysis requires

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[16] Because this case does not warrant preemption under the Court's existing obstacle-preemption jurisprudence, there is no

"examining the federal statute as a whole and identifying its purpose and intended effects." *Crosby* v. *National Foreign Trade Council*, 530 U.S. 363, 373 (2000). As we have already explained, Congress never sought to reduce or limit the States' inherent and preexisting power to regulate uranium mining within their borders. See *West Va. Univ. Hosps.*, 499 U.S. at 98 (emphasizing that "the purpose of a statute includes not only what it sets out to change, but also what it resolves to leave alone"). To the contrary, the unmistakable trend since 1946 has been to increase the States' role in the development and regulation of nuclear energy. See *Pacific Gas*, 461 U.S. at 209 (stating that "the point of the 1959 Amendments was to heighten the States' role").[16]

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need to determine whether that doctrine should be reconsidered because it "leads to the illegitimate—and thus unconstitutional—invalidation of state laws." *Wyeth*, 555 U.S. at 604 (Thomas, J., concurring in the judgment). Were the Court to conclude otherwise, it should modify its existing doctrine as necessary to avoid preemption here. See *id.* at 587 (Thomas, J., concurring in the judgment) (expressing particular skepticism of arguments based on "interpretation[s] of broad federal policy objectives, legislative history, or generalized notions of congressional purposes that are not contained within the text of federal law," all of which are involved here). And even were the Court to replace its current "physical impossibility" standard with a "direct conflict" standard, no such conflict exists because federal law does not give petitioners any sort of affirmative "right" to mine uranium. *Id.* at 589–94 (Thomas, J., concurring in the judgment).

[16] Congress also undertook a substantial revision of the Atomic Energy Act early this century without disturbing the uranium mining moratorium in Virginia or any other State. See Energy Policy Act of 2005, Pub. L. No. 109-58, §§ 601–657, 119 Stat. 594, 779–814 (Aug. 8, 2005). This too undermines any contention

To be sure, "[t]here is little doubt that a primary purpose of the Atomic Energy Act was, and continues to be, the promotion of nuclear power." *Pacific Gas*, 461 U.S. at 221. But Congress did not seek to develop nuclear power "at all costs," *id.* at 200, and the "comprehensive federal scheme" for nuclear power has never covered uranium mining. *Arizona* v. *United States*, 567 U.S. 387, 406 (2012) (quoting *Isla Petroleum*, 485 U.S. at 503) (internal quotation marks omitted).

For that reason, petitioners' attempt to analogize this case with *Arizona* v. *United States* falls flat. See Pet. Br. 56–57. There, Congress had struck a "careful balance" about precisely the same issue that state law was attempting to regulate: "unauthorized employment of aliens." *Arizona* v. *United States*, 567 U.S. at 406. Here, in contrast, the Atomic Energy Act has never regulated conventional uranium mining at all. And, contrary to petitioners' suggestions, see Pet. Br. 56, the proper inference is "that the historic police powers of the States were not to be superseded," *Wyeth*, 555 U.S. at 565, not that Congress silently intended to preempt *all* State authority in this area and thus leave uranium mining entirely unregulated by either the States or the Commission. As the court of appeals aptly stated, "[t]hat cannot be the law." Pet. App. 13a.

B. Petitioners' obstacle-preemption argument also violates the spirit, and perhaps the letter, of the anti-commandeering doctrine. It should be common

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that the "clear and manifest purpose of Congress" was to displace Virginia's exercise of its sovereign power. *Pacific Gas*, 461 U.S. at 206.

ground that Congress could not simply order States to create a regulatory apparatus to oversee uranium mining within their borders. See *Printz* v. *United States*, 521 U.S. 898 (1997); *New York* v. *United States*, 505 U.S. 144 (1992).

Yet that is, in practice, exactly what accepting petitioners' obstacle-preemption argument would do here. As the Commission has repeatedly acknowledged, under existing law it does not—and cannot—regulate uranium mining. See page 9, *supra*. It is inconceivable that entities like petitioners would be entitled to engage in a form of mining that has never been permitted in Virginia entirely "free of government oversight." Pet. App. 13a. Cf. 33 U.S.C. § 1313 (establishing State water quality standards under the Clean Water Act, which would likely be impacted by stormwater runoff from a large mining operation); 33 U.S.C. § 1319 (Clean Water Act's enforcement provision). So the inevitable effect of a ruling for petitioners on an obstacle-preemption theory would be exactly the same as the obviously unconstitutional statute hypothesized above. This prospect too confirms the wisdom of respecting Congress's longstanding decision to forego federal regulation—and thus leave States' preexisting regulatory authority undisturbed—until "*after* [uranium's] removal from its place of deposit in nature." 42 U.S.C. § 2092 (emphasis added).

* * *

As always, Congress remains free to alter the balance between the States and the Federal Government when it comes to uranium mining. If Congress

concludes that States are hindering vital national interests or that existing mechanisms are insufficient to ensure an adequate national supply of uranium—a drumbeat by petitioners and their amici that goes conspicuously unendorsed by the Federal Government itself—Congress could change the law and provide for federal oversight over uranium mining on private property or limit the States' ability to regulate in this area. See *Hodel* v. *Virginia Surface Mining & Reclamation Ass'n*, 452 U.S. 264, 268–69, 280–83, 305 (1981) (upholding the Surface Mining Act under the Commerce Clause and against other constitutional challenges). But, absent such action, the correct instruction to draw from the text, structure, and history of the Atomic Energy Act is that Congress did not intend to preempt state regulation of conventional uranium mining.

CONCLUSION

The judgment of the court of appeals should be affirmed.

Respectfully submitted.

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In The
Supreme Court of the United States

VIRGINIA URANIUM, INC., *et al.*,

Petitioners,

v.

JOHN WARREN, *et al.*,

Respondents.

On Writ Of Certiorari To The United States Court Of Appeals For The Fourth Circuit

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CORPORATE DISCLOSURE STATEMENT

The disclosure statement in the Petition for Writ of Certiorari remains accurate.

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INTRODUCTION

The first sentence in Respondents' Brief captures the essence of their argument: because the regulatory jurisdiction of the Nuclear Regulatory Commission ("NRC") under the Atomic Energy Act ("AEA") is confined to activities that take place "*after* uranium's removal from its place of deposit in nature," they say, the statute cannot "preempt a state law addressing what happens *before* it is removed." Respondents' Br. 1 (brackets omitted). The argument rests on the premise that the scope of the field preempted by the AEA depends solely on *what activity* a State purports to regulate, regardless of *what purpose* the state regulation is designed to achieve and *what effect* the state regulation has on activities the NRC has exclusive authority to regulate. Under Respondents' theory, the mining ban would be perfectly valid even if Virginia's statute explicitly stated what is clear from its background and history: "because the Commonwealth of Virginia disagrees with the NRC that uranium milling and tailings-storage activities do not pose unacceptable radiological safety hazards, the mining of uranium is hereby banned until such time as *Virginia* is satisfied that milling and tailings-storage activities may be undertaken without significant radiological risk." Respondents' argument is squarely contradicted by both the text of the AEA and this Court's precedents interpreting it.

Congress defined the field preempted by the AEA "in part, by reference to *the motivation* behind the state law." *English v. General Elec. Co.*, 496 U.S. 72, 84 (1990) (emphasis added). A State may not regulate "for the

protection of the public health and safety from radiation hazards" arising from the milling of uranium ore and the storage of uranium tailings unless the NRC approves its regulatory program and enters an agreement vesting the State with regulatory authority. 42 U.S.C. § 2021(b). Absent such an agreement, Congress directed, the State may only "regulate activities for purposes other than protection against radiation hazards." *Id.* § 2021(k).

Virginia has no agreement with the NRC vesting it with authority over milling and tailings. But the mining ban challenged here, Respondents have repeatedly conceded, has both the purpose and the effect of prohibiting uranium milling and tailings-storage activities based on concerns about radiation hazards. If Section 2021 is to have any meaning, Virginia's ban cannot stand.

Respondents' argument is also foreclosed by this Court's decision in *Pacific Gas & Electric Co. v. State Energy Resources Conservation and Development Commission* ("*PG&E*"), 461 U.S. 190 (1983). *PG&E* considered a California law imposing a moratorium on construction of nuclear power plants. The law, like Virginia's here, regulated an *activity* squarely within the State's "traditional authority": "the certification of new nuclear plants," a task the Court described as "characteristically governed by the States." *Id.* at 191, 198, 205. The Court rejected California's argument—identical to Virginia's here—that because the AEA left undisturbed the State's authority to determine the "[n]eed for new power facilities," *id.* at 205, it could

exercise that authority for *any purpose*. Instead, the Court held that a state law "grounded in safety concerns falls squarely within the prohibited field," but it concluded that California's moratorium was not preempted only because it was based on "a non-safety rationale." *Id.* at 212-13.

Respondents claim that we have presented the Court with "carefully edited" snippets from *PG&E* while "shear[ing] important language" from that decision. Respondents' Br. 17. But it is Respondents who ignore the Court's stated reasoning. Most importantly, Respondents erroneously suggest that California's moratorium on construction of nuclear power plants differs from Virginia's mining ban because, "unlike uranium mining, 'nuclear construction' has always been a matter of intense federal concern and regulation." *Id.* at 28 (quoting *PG&E*, 461 U.S. at 203). But, again, this Court emphasized that the AEA "does not at any point expressly require the States to construct or authorize nuclear power plants or prohibit the States from deciding, as an absolute or conditional matter, not to permit the construction of any further reactors." *PG&E*, 461 U.S. at 205. Indeed, the Court noted, the statute expressly reaffirms that authority to decide whether additional nuclear power plants should be constructed was "to remain in state hands." *Id.* at 208 (citing 42 U.S.C. § 2018).

Thus, the premise of *PG&E* was that the State, as a general matter, had authority to decide whether to permit construction of a nuclear power plant. Nevertheless, the Court squarely rejected California's

argument, identical to Virginia's submission here, that the State could exercise this unquestioned regulatory authority based on radiological safety concerns arising from subsequent activities that are subject to exclusive NRC regulation—in *PG&E*, how the plant is constructed and operated. Just as the Act preempted California from using its general authority over the need for new nuclear power plants to "completely prohibit new construction until its safety concerns are satisfied by the federal government," *id.* at 212, Virginia may not use its traditional authority over mining to completely prohibit uranium mining until its concerns about the radiological safety of milling and tailing-storage operations are satisfied.

Respondents' other efforts to distinguish *PG&E* are equally unconvincing, and they are ultimately left asking the Court instead to simply *repudiate* the opinion. Respondents' Br. 32 n.7 (arguing that the reasoning of *PG&E* is "wrong in several respects"). But Respondents failed to make this argument in their opposition to certiorari and so it comes too late. It also comes with too little. *PG&E* was correctly decided, and in any event, Respondents have not shown anything approaching the "special justification" required for this Court to overrule its previous interpretation of a statute. *Michigan v. Bay Mills Indian Cmty.*, 134 S. Ct. 2024, 2036 (2014).

Respondents inveigh at length on the difficulties of discerning the purpose behind a State law; but it is no more difficult here than in a host of other areas in which legislative purpose must be determined to

resolve federal questions. In any event, difficult or not, that is part of the test for preemption that Congress has chosen, and this Court's task is to faithfully apply it, not come up with an easier one.

Respondents protest that they have not really conceded that the purpose of the mining ban is to protect against the radiological safety hazards arising from milling and tailings-storage activities. But in fact they *repeatedly* conceded this point *at every stage* of the litigation, both courts below (as well as the dissent in the Court of Appeals) acknowledged and relied upon the concession, and Respondents repeated the concession in their Brief in Opposition in this Court. *Even now* they do not advance any serious argument that the ban is not "grounded in [these] safety concerns." *PG&E*, 461 U.S. at 213.

Finally, Respondents' mining ban impermissibly frustrates and obstructs the purposes of the AEA.

ARGUMENT

I. Respondents' Approach to Field Preemption Is Flatly Contrary to the Text of the AEA.

1. In 1959, Congress enacted Section 2021 "to clarify the respective responsibilities" under the AEA "of the States and the [Nuclear Regulatory] Commission." 42 U.S.C. § 2021(a)(1). Section 2021(b) specifies that if a State wishes "to regulate the materials

[within the NRC's exclusive jurisdiction] for the protection of the public health and safety from radiation hazards," it must first obtain the NRC's "agreement[] . . . providing for discontinuance of the regulatory authority of the Commission" over the radiation hazard in question. *Id.* § 2021(b). Absent such an agreement, the State is left only with its preexisting authority "to regulate activities for *purposes other than* protection against radiation hazards." *Id.* § 2021(k) (emphasis added).

Because Virginia has no agreement vesting it with the NRC's authority over the milling of uranium ore or the storage of uranium tailings, the Commonwealth *may not* regulate for the purpose of "the protection of the public health and safety from radiation hazards" arising from those materials. *Id.* § 2021(b). Yet as Respondents have repeatedly conceded (more on that below), the mining ban has the purpose and effect of regulating the radiological hazards arising from uranium milling and tailings-storage by precluding those follow-on activities. If a State can in this manner regulate the radiological hazards entrusted to the NRC regardless of whether it has reached an agreement with the NRC, Section 2021 is empty of any significance.

Respondents' cursory efforts to rebut these textual arguments are unpersuasive. Noting that "Section 2021(b) grants States that enter into agreements with the Commission a *new* power to regulate matters that otherwise would lie within exclusive federal jurisdiction," Respondents argue that this fact somehow

"destroys the predicate for . . . the maxim *expressio unius est exclusio alterius*." Respondents' Br. 26 n.5. To the contrary, the new power granted by Section 2021(b) *is the predicate* for the *expressio unius* inference, for that new power to regulate for the purpose of protecting against radiation hazards is conditioned on an agreement between the State and the NRC. The expression of one carefully conditioned way of regulating for radiological safety purposes is necessarily an exclusion of the State's authority to regulate for those purposes in any other way. *Raleigh & Gaston R.R. Co. v. Reid*, 13 Wall. (80 U.S.) 269, 270 (1871). Section 2021(k) confirms the point, providing that the preemptive scope of the remainder of Section 2021 "shall [not] be construed to affect" State authority "to regulate activities for purposes other than protection against radiation hazards." If Section 2021 *has no preemptive scope*, as Respondents say, then Subsection k has *no function at all*.

This Court's interpretation of the remarkably similar preemption provisions of the Occupational Safety and Health Act ("OSH Act") in *Gade v. National Solid Wastes Management Association*, 505 U.S. 88 (1992), strongly supports this reading. Like Section 2021(b), Section 18(b) of the OSH Act provides that a State may "assume [regulatory] responsibility" for occupational health and safety if it reaches agreement with the Secretary of Labor to take over the authority. "The unavoidable implication of this provision," the Court held in *Gade*, "is that a State may not enforce its own occupational safety and health standards without

obtaining the Secretary's approval." 505 U.S. at 99 (plurality opinion); *accord id.* at 112-13 (Kennedy, J., concurring). Further, just as Section 2021(k) *expressly preserves* State authority to "regulate for *purposes other than* protection against radiation safety," Section 18(a) of the OSH Act "saves from pre-emption any state law regulating an occupational safety and health issue with respect to which no federal standard is in effect." *Id.* at 100 (plurality). "[T]he natural implication of this provision is that state laws regulating the same issue as federal laws"—that is, state laws outside the savings clause—"are not saved," for that would render the savings clause "superfluous." *Id.*; *accord id.* at 112 (Kennedy, J., concurring). The same conclusion necessarily follows here.

Respondents emphasize that "none of Section 2021's provisions address state regulation of uranium mining." Respondents' Br. 21. That observation is true but entirely misses the point. Section 2021 does not address uranium mining—or any of the other innumerable activities States may regulate, such as police and fire protection, the use of state roads and rails, or (as this Court recognized in *PG&E*, 461 U.S. at 198, 205) the certification of the need for new power plants. There was no need to specify the myriad activities generally subject to State regulation (if such specification were possible) because Congress chose to define the preempted field based on the *purpose* of the State's regulation and its *effect* on activities subject to exclusive NRC regulation, not the *activities* States generally may regulate.

Respondents suggest that prior to Section 2021's enactment in 1959, States could have banned uranium mining for the purpose of protecting against the radiation hazards of uranium milling- and tailing-storage activities. Whether or not that is so, one of Congress's stated purposes in enacting Section 2021 was to "clarify the respective responsibilities . . . of the States and the Commission" in this area. 42 U.S.C. § 2021(a)(1). And as clarified by Section 2021, there is no question that States may not regulate activities otherwise within their authority if they are doing so "for purposes" of "protection against radiation hazards" arising from activities subject to exclusive NRC regulation. *Id.* § 2021(k). For this reason, Respondents' hypothetical about the 16-year-old and the family car is wholly inapt. The hypothetical assumes that the sole purpose of Section 2021 was to extend new regulatory authority to the States, but by its plain text that provision was *also* intended to clarify the *limits* on State authority under the AEA.

2. Respondents repeatedly invoke this Court's decision in *Puerto Rico Department of Consumer Affairs v. Isla Petroleum Corp.*, 485 U.S. 495 (1988), but *Isla Petroleum* is completely irrelevant to this case. *Isla Petroleum* involved the Emergency Petroleum Allocation Act of 1973, which had authorized the President to set petroleum prices and expressly preempted any state regulation in conflict with those price controls. *Id.* at 497. The plaintiffs challenged a Puerto Rico regulation as preempted under the Act, but by the time they brought suit Congress had expressly repealed the

President's authority to control petroleum prices. *Id.* at 498-99. As a result, the plaintiffs were reduced to arguing that Congress's *elimination* of federal regulation in this field should be understood as preempting state regulation. *Id.* at 500. This Court disagreed, holding that the "repeal of [federal] regulation did not leave behind a pre-emptive grin without a statutory cat." *Id.* at 504.

This case is nothing like *Isla Petroleum*. Petitioners do not contend that the AEA created a regime free from all Government control—state or federal—as was argued in *Isla Petroleum*. *See id.* at 500. And far from "pre-emption *in vacuo*," *id.* at 503, the text of the AEA unambiguously preempts state regulation that has the purpose and effect of regulating activities, like uranium milling and tailing-storage, that are subject to the exclusive jurisdiction of the NRC. Section 2021(b) allows a State to regulate such activities for radiological-safety purposes only *pursuant to* an NRC agreement, and Section 2021(k) confirms that in all other cases States may exercise their traditional regulatory authority only "for purposes *other* than protection against radiation hazards." (emphasis added). Indeed, if States were not preempted from regulating for radiological-safety purposes unless they followed the Section's procedure, Section 2021 as a whole would be rendered *utterly meaningless*. Respondents contend that we cannot rely on Section 2021 as a whole, Respondents' Br. 21, but the ordinary principles of statutory interpretation say otherwise. *See* ANTONIN SCALIA & BRYAN A. GARNER, READING LAW § 24, p. 167 (2012) (statute's "text must be construed as a whole").

Were the Court to hold, as Respondents urge, that there is no "enacted statutory text" in the AEA supporting preemption, the result would be that the AEA *preempts nothing at all*. But even the Commonwealth does not take its *Isla Petroleum* argument seriously enough to accept that conclusion. Respondents concede that "[a] state moratorium on nuclear construction grounded in safety concerns falls squarely within the prohibited field," insisting that they "have no quarrel" with that view of preemption. Respondents' Br. 27, 29, 30. By admitting that the AEA has *any* "prohibited field," the Commonwealth gives away the game. *Isla Petroleum* does not apply where the question is not whether the statute has any preemptive force at all, but rather *the scope* of the field preempted.

3. Respondents repeatedly invoke Justice Scalia's opinion in *Shady Grove Orthopedic Associates, P.A. v. Allstate Insurance Co.*, 559 U.S. 393 (2010), *see, e.g.*, Respondents' Br. 38; *see also* Amicus Brief of Preemption Law Professors 10-17 (Sept. 4, 2018) ("Professors' Br."), but it has little, if any, bearing on the question before the Court. The issue in *Shady Grove* was whether a New York statute prohibiting class actions in certain cases was preempted by FED. R. CIV. P. 23 in cases brought in federal court. The Court held that the New York law was preempted because it directly conflicted with Rule 23. 559 U.S. at 398-99. The Court then responded to the dissent's argument that even if "the literal terms of [the state statute] address the same subject as Rule 23—*i.e.*, whether a class action may be maintained—. . . the provision's *purpose* is to restrict only remedies." *Id.* at 402. After cataloging some of the

difficulties with discerning legislative purpose, the Court refused to determine "whether [the] state and federal rules conflict based on the subjective intentions of the state legislature." *Id.* at 404.

As an initial matter, however difficult it may be to determine the purpose behind a state statute prohibiting class actions, the lower federal courts have faithfully and ably applied the AEA's purpose-based test since the Court announced it in *PG&E*. *See* Pet. Br. 47-52 (citing cases). And this Court routinely assesses the motivation underlying state enactments in other areas of the law. *See, e.g.*, *Hunt v. Cromartie*, 526 U.S. 541, 549 (1999) (equal protection); *Maine v. Taylor*, 477 U.S. 131, 140-45 (1986) (dormant commerce clause).

In any case, the Court in *Shady Grove* had the discretion to decline to apply a purpose-based test because Rule 23 did not define its preemptive scope at all, much less by express reference to the purpose of the state law in question. In contrast, as this Court has repeatedly recognized, the clear text of the AEA defines the preempted field "in part, by reference to *the motivation* behind the state law." *English*, 496 U.S. at 84; *see* 42 U.S.C. § 2021(k) (States may not regulate for "purposes" of "protection against radiation hazards"). The language of a statute "necessarily contains the best evidence of Congress' pre-emptive intent," *CSX Transp., Inc. v. Easterwood*, 507 U.S. 658, 664 (1993), and the judicial task "is to apply the text of the statute, not to improve upon it." *EPA v. EME Homer City Generation, L.P.*, 134 S. Ct. 1584, 1600 (2014) (brackets omitted).

The point is well illustrated by this Court's jurisprudence under the Religious Freedom Restoration Act ("RFRA"). In *Employment Division v. Smith*, 494 U.S. 872 (1990), this Court held that the Free Exercise Clause does not require strict judicial scrutiny when a "neutral, generally applicable law" burdens an individual's "religiously motivated action." *Id.* at 881, 882-83. As in *Shady Grove*, Justice Scalia, writing for the Court, justified this rule in part by pointing to the formidable difficulties of such an inquiry: it could involve courts in "[j]udging the centrality of different religious practices," for example, and would require that "judges weigh the social importance of all laws." *Id.* at 887, 890. But when Congress responded to *Smith* by requiring that very inquiry by statute, the Court unanimously recognized that the Court's reservations about the difficulty of the inquiry must be set aside:

> We have no cause to pretend that the task assigned by Congress to the courts under RFRA is an easy one. Indeed, the very sort of difficulties highlighted by the Government here were cited by this Court in deciding that the approach later mandated by Congress under RFRA was not required as a matter of constitutional law under the Free Exercise Clause. But Congress has determined that courts should strike sensible balances, pursuant to a compelling interest test. . . .

Gonzales v. O Centro Espirita Beneficente Uniao do Vegetal, 546 U.S. 418, 439 (2006) (citation omitted). So too here: in Section 2021, Congress deliberately chose to define the scope of the field preempted by the AEA

by means of a test that looks in part to the purpose of state law. The difficulty of the task is no license for the courts to refuse the assignment.

II. Respondents' Approach to Field Preemption Cannot Be Squared with This Court's Precedent.

This Court has addressed the preemptive scope of the AEA on three occasions, and each time it has affirmed the purpose-based preemption inquiry established by Congress in Section 2021. *See English*, 496 U.S. at 84; *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 249 (1984); *PG&E*, 461 U.S. at 213. Respondents' efforts to escape—or, failing that, repudiate—these repeated holdings are meritless.

Respondents accuse us of "repeatedly omit[ting] key language from both *Pacific Gas* and *English*," Respondents' Br. 27, but it is their efforts to sweep those precedents aside that conflict with this Court's unambiguous language at every turn. The Commonwealth first argues that *PG&E* involved a state attempt to regulate "private construction, ownership, and operation of commercial nuclear power reactors," which is a matter under the "strict supervision" of the federal government. *Id.* at 29. But *PG&E* could not have been clearer in repeatedly rejecting this characterization of what the case was about: "At the outset, we emphasize that the statute *does not* seek to regulate the construction or operation of a nuclear powerplant." *PG&E*, 461 U.S. at 212 (emphasis added); *see also* U.S. Br. 19 ("California had sought to regulate the antecedent question

whether a plant should be constructed, not *how* it should be constructed."); *id.* at 25-26.

Next, Respondents say that *PG&E*'s holding is distinguishable because this case "involves a state moratorium on an activity that has never even been regulated (much less entirely occupied) by federal law." Respondents' Br. 29. The same was true in *PG&E*. The Court repeatedly emphasized that the States have regulatory jurisdiction over "the generation of electricity itself, [and] the economic question whether a particular plant should be built." 461 U.S. at 207; *see also id.* at 206 (describing the authority to determine the need for new power plants as "a field which the States have traditionally occupied"); *id.* at 206 (AEA itself provided that States may regulate the question whether a new power plant may be constructed) (citing 42 U.S.C. § 2018). The Court in *PG&E* looked to the purpose of California's law not because it regulated an activity exclusively governed by federal law *but because it regulated an activity normally governed by State law*. *See PG&E*, 461 U.S. at 212.

Respondents point out that federal regulation "does not even commence until '*after* [uranium's] removal from its place of deposit in nature,'" and argue that "field preemption [should not extend] over an area that Congress has specifically declined to regulate in the very statute at issue." Respondents' Br. 22 (first alteration in original) (quoting 42 U.S.C. § 2092). But federal regulation of nuclear power plant construction and operations likewise does not even commence until *after* the decision is made by the State to permit the

construction of a plant in the first place, and Congress specifically declined to regulate that decision in the very statute at issue. *See* 42 U.S.C. § 2018. Nevertheless, this Court held that field preemption *does* extend to such an antecedent state decision when its purpose and effect are to regulate activities, based on radiation safety concerns, that are subject to the NRC's exclusive jurisdiction. *PG&E*, 461 U.S. at 212-13.

Respondents' effort to brush aside this Court's opinion in *English* also fails. The Court's plain statement in that case that the AEA's preempted field is "defined . . . , in part, by reference to the motivation behind the state law" may safely be ignored, according to Respondents, because "[s]aying that . . . 'motivation' is sometimes necessary before preemption will be found is not . . . the same as saying it is invariably sufficient." Respondents' Br. 31. Yet again, the *English* Court expressly *rejected* the very distinction proposed by Respondents. An impermissible purpose, this Court explained, is *not "necessary* to place a state law within the pre-empted field," since States may not directly regulate activities such as "nuclear-plant construction and operation" even out of "nonsafety concerns." *English*, 496 U.S. at 84. But because the field is *also* partially "defined by reference to the purpose of the state law in question," an impermissible purpose *is sufficient. Id.*

Ultimately, Respondents ask the Court to repudiate the reasoning of *PG&E* as "both unnecessary to the Court's holding and 'wrong in several respects.'" Respondents' Br. 32 n.7. This prayer for relief comes too

late in the day. Respondents did not ask the Court to overrule the majority opinion in *PG&E* in their Brief in Opposition to certiorari, so that door is now closed to them. *Alabama v. Shelton*, 535 U.S. 654, 660 n.3 (2002).

Even if the issue was properly before the Court, Respondents have not come close to justifying the overruling of *PG&E*. First, *PG&E*'s interpretation of the purpose-based preemptive scope of the AEA is plainly correct. Second, because "*stare decisis* is a foundation stone of the rule of law," any "departure from the doctrine demands special justification." *Bay Mills Indian Community*, 134 S. Ct. at 2036 (quotation marks omitted). "What is more, *stare decisis* carries enhanced force when a decision . . . interprets a statute," as *PG&E* did, for "[t]hen, unlike in a constitutional case, critics of [the] ruling can take their objections across the street, and Congress can correct any mistake it sees." *Kimble v. Marvel Entm't, LLC*, 135 S. Ct. 2401, 2409 (2015). Respondents have not provided the "special justification" necessary for this Court to "reverse course." *Id.*

III. Respondents' Approach to Field Preemption Would Permit States To Stymie the Development of Atomic Energy.

Since *PG&E* was handed down in 1983, the Nation's atomic energy industry has developed based upon the jurisdictional boundary-markers laid down by that opinion. Respondents provide *no plausible*

explanation of how a ruling in their favor could be written without effectively overruling the lower-court decisions that have protected the industry against pretextual State regulations driven by local concerns about radiological safety that are not shared by the NRC. *See, e.g.*, *Skull Valley Band of Goshute Indians v. Nielson*, 376 F.3d 1223 (10th Cir. 2004); *Entergy Nuclear Vermont Yankee, LLC v. Shumlin*, 733 F.3d 393 (2d Cir. 2013).

The domestic production of uranium is critical to both national security and our economy. *See* Amicus Brief of Senators Cotton, Inhofe, and Cruz 3, 19 (July 26, 2018); Amicus Brief of the Chamber of Commerce 7-8 (July 26, 2018). But powerful localist political forces frequently impel States to pretextually regulate radiological hazards outside their authority. "Time and again, the lower courts have properly determined that state action, although facially permissible, was undertaken for an impermissible radiological safety purpose." Amicus Brief of Entergy Operations, Inc. 5 (July 26, 2018); *see also* Amicus Brief of Nuclear Energy Institute 3 (July 26, 2018). Respondents' approach to preemption would dismantle this critically important body of preemption jurisprudence from the foundation up, providing "an easy roadmap for evasion of Congress's judgments regarding the States' carefully defined and limited role in this sphere." U.S. Br. 27.

Respondents' perfunctory response to these concerns is far from reassuring. Because the federal government does not regulate the activity of uranium mining, the Commonwealth says, the Court can deny

preemption on that basis without "say[ing] anything . . . about States' ability to regulate (directly or indirectly) either nuclear power plants or the storage and transportation of spent nuclear fuel," which, unlike uranium mining, are "subjects of pervasive federal regulation." Respondents' Br. 48 (citations and quotation marks omitted). That argument obviously does not work. Rather than comparing apples to apples, Respondents are trying to compare the *pretext*, in one case, with the *genuine purpose*, in the other. Nuclear power plants and fuel are subject to pervasive federal regulation, true enough, but *so are uranium milling and tailings management*. Under the rule Respondents urge the Court to adopt, just as Virginia would be permitted to ban uranium milling and tailing-storage activities through the pretext of banning uranium mining, so too would Utah be permitted to ban storage of spent fuel through the pretext of regulating state roads, municipal police and fire service, and corporate liability rules. *But see Skull Valley*, 376 F.3d at 1247-48.

IV. Respondents Have Repeatedly Conceded that Virginia's Ban Is Grounded in Impermissible Radiological Safety Concerns Related to Milling and Tailings Activities.

As this case comes to the Court, Respondents have repeatedly *conceded* that the ban on uranium mining is grounded in concerns about the radiological safety of milling and tailings operations—matters entrusted exclusively to the NRC. Respondents now attempt to walk back their concession, but the record is clear.

In the district court, Petitioners' complaint repeatedly alleged that the ban was grounded in concerns about the radiological safety of milling and tailings management, *e.g.*, Compl., Pet.App.232a, and in moving to dismiss, Respondents explicitly accepted those allegations as true, J.A.43-44. Petitioners' cross-motion for summary judgment again argued that Virginia's ban was motivated by these impermissible concerns, introducing nearly 700 pages of evidence into the record in support of the point. In response, rather than disputing that its ban was motivated by milling- and tailings-related concerns, Virginia instead argued that "[t]he Court need not conduct a searching review of legislative motive." J.A.211-12 (footnote omitted). The district court expressly accepted Respondents' concession, noting that "the General Assembly enacted [the ban] out of concern for uranium (and therefore, radiological) safety." Pet.App.69a.

In their briefing before the Fourth Circuit, Respondents again conceded the point. "All of [the] materials" that Petitioners had introduced into the record showing the radiological safety purpose of Virginia's ban "were beside the point," Respondents argued, "because Rule 12(b)(6) required defendants to accept as true that Virginia enacted the moratorium based on radiological safety concerns." J.A.216 (footnote omitted); *see also id.* at n.58. Both the majority and the dissent in the Court of Appeals likewise accepted Respondents' concession and decided the case on the assumption that the purpose of the mining ban was to preclude uranium milling- and tailing-storage

activities based on concerns about radiological safety. Pet.App.10a ("the Commonwealth concedes that it lacks a non-safety rationale for banning uranium mining"); Pet.App.52a (Traxler, J., dissenting) ("the Commonwealth has conceded at this point in the litigation that [the uranium mining ban] was enacted for just that purpose").

Finally, Respondents once again conceded this point before this Court. Our Petition repeatedly emphasized "the Commonwealth's admission (at least for purposes of its motion to dismiss) that its true motivation for banning uranium mining was to protect against the radiological hazards of uranium milling and tailings storage," Pet.21; *see also* Pet.2, 13, 15, 18, 27, and the point is even embedded in the Question Presented, *see* Pet.i. Under this Court's Rule 15.2, Respondents were obliged to dispute the existence or nature of that concession in their brief opposing our Petition. But instead, Respondents acknowledged that they were "assuming for purposes of a Rule 12(b)(6) motion that Virginia's uranium-mining moratorium was based on radiological safety concerns," Opp.26, and again argued that the concession about the Commonwealth's motivation was irrelevant. Opp.17.[1] Respondents note that they did raise the issue in their supplemental brief responding to the amicus brief submitted by the United States in response to the Court's

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[1] In light of their complete failure to dispute the nature of their concession in the Brief in Opposition, Respondents' remarkable suggestion that the Court should dismiss the writ as improvidently granted comes with poor grace. Respondents' Br. 14.

invitation. But Rule 15.2 requires a respondent to "point out in the brief in opposition, *and not later*, any perceived misstatement made in the petition." (emphasis added).

Even now, Respondents tellingly do not deny that their ban is "grounded in [radiological] safety concerns." *PG&E*, 461 U.S. at 213. Instead, they advance two narrow arguments: (i) the purpose of the ban is a question of law, not "historical fact," and therefore not subject to concession, Respondents' Br. 34; and (ii) they conceded only that the ban was *partially* "motivated by" impermissible concerns, not *solely* motivated by them, *id.* at 43; *see also* Professors' Br. 20-21. Because neither argument was advanced or passed upon in the courts below, they are not properly before this Court. *E.g.*, *McLane Co., Inc. v. EEOC*, 137 S. Ct. 1159, 1170 (2017). In any case, both lack merit.

Taking the second point first, whether milling-and-tailings-related concerns were the "sole" motivation for the ban is completely irrelevant. The AEA preempts state laws "*grounded* in safety concerns," *PG&E*, 461 U.S. at 213 (emphasis added), not just laws "grounded *solely* in safety concerns." *See Entergy*, 733 F.3d at 422. Section 2021 contains no exception allowing States to regulate "for the protection of the public health and safety from radiation hazards" without an agreement with the NRC so long as their regulations tangentially pursue *other* purposes as well. The precise degree to which impermissible concerns must predominate over other purposes in the State's overall constellation of motives is a matter best left for the lower

courts in the first instance. *See* U.S. Br. 23, 27 n.7. Petitioners have consistently argued and alleged that impermissible radiological-safety concerns were the predominate and but-for cause of the ban, *e.g.* Pet.App.232a, and that plainly suffices under any plausible version of the inquiry.

Respondents' attempt to escape their repeated concession by casting the issue as a question of law fares no better. As Respondents admit, in at least some contexts this Court has considered the issue of a State's motivation as "a question of fact," and it is unclear why the inquiry would be any different here. Respondents' Br. 41 (citing *Hunter v. Underwood*, 471 U.S. 222, 229 (1985)); *see also Hunt*, 526 U.S. at 549 (equal protection); *Taylor*, 477 U.S. at 140-45 (dormant commerce clause).

V. Virginia's Ban Is Also Preempted Because it Frustrates the AEA's Purposes and Objectives.

Finally, Virginia's uranium-mining ban is independently preempted because it is an obstacle to the implementation of the AEA's purposes and objectives.[2] The AEA has two core purposes that are relevant here: to vest the federal experts at the NRC with exclusive power to ensure public health and safety from

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[2] Like their request to overrule *PG&E*, Respondents' suggestion that the Court overrule its "existing doctrine" on obstacle preemption, Respondents' Br. 50 n.15, comes too late, *Shelton*, 535 U.S. at 660 n.3.

radiological hazards, and to promote the private-sector development of peacetime atomic power. *See* U.S. Br. 31. Respondents' ban frustrates both of them. It prevents the private development of the Nation's largest untapped uranium resource, hobbling a domestic industry that is of critical military and economic importance. *See supra*, Part III. And it does so based on a judgment about radiological safety that the NRC has *considered and rejected*. *See* Amicus Brief of former Nuclear Regulators 4, 11, 33-35 (July 26, 2018).

Moreover, the challenged ban independently violates obstacle-preemption principles by "conflict[ing] with Congress's chosen system for state participation in the regulatory field of nuclear-safety concerns," U.S. Br. 32—the Section 2021 Agreement process. It would impermissibly "undercut" that congressionally designed process if the State could take the regulatory reins "without undergoing the [statutory] approval process." *Gade*, 505 U.S. at 100-01 (plurality); *see also id.* at 113 (Kennedy, J., concurring). The Commonwealth provides no response to this argument.

Instead, Respondents make the novel claim that invalidating the mining ban would "violate[ ] the spirit, and perhaps the letter, of the anti-commandeering doctrine," because "in practice," Virginia would feel compelled to "create a regulatory apparatus to oversee uranium mining." Respondents' Br. at 51, 52. The argument is clearly wrong. As Respondents acknowledge, the injunction we request would not require Virginia to establish any new regulatory regime; it would merely enjoin State officials to ignore Virginia's

mining ban and "accept and process" our State permit applications, under existing law, like any other mining application. Respondents' Br. 13 (quoting Pet.App.193a). To the extent the Commonwealth concludes its existing regulation of mineral mining must be supplemented by "a regulatory apparatus to oversee uranium mining," *id.* at 52, *that would be the Commonwealth's choice*. A federal decision striking down a state electoral map as unconstitutional is not "commandeering" merely because "in practice" the "inevitable effect" of such a decision will be to require the State to enact a new apportionment. *Id.* at 51-52; *cf. Maryland Comm. for Fair Representation v. Tawes*, 377 U.S. 656, 675 (1964). It is settled that anti-commandeering principles do not limit "the power of federal *courts* to order state officials to comply with federal law" since "the text of the Constitution plainly confers this authority." *New York v. United States*, 505 U.S. 144, 179 (1992).

CONCLUSION

The Court should reverse the judgment of the Fourth Circuit.

September 26, 2018

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No. 16-1275

In the Supreme Court of the United States

VIRGINIA URANIUM, INC., et al.,

Petitioners,

v.

JOHN WARREN, et al.,

Respondents.

On Petition For A Writ Of Certiorari To The United States Court Of Appeals For The Fourth Circuit

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IN THE
SUPREME COURT
OF THE UNITED STATES

VIRGINIA URANIUM, INC., ET AL.,
PETITIONERS,

v.

JOHN WARREN, ET AL.,
RESPONDENTS.

SUPPLEMENTAL BRIEF FOR RESPONDENTS

The federal government argues that a 36-year-old Virginia policy that went unchallenged for 33 years might (or might not) be preempted by a federal statute that has been on the books for 54 years based on a construction of that statute given in a 35-year-old decision of this Court—a decision that, like all decisions of this Court interpreting that same federal statute, held that it did not preempt the allegedly usurped state law.

To be clear: This case does not involve whether the Commonwealth of Virginia may impose a moratorium on conventional uranium mining. The federal government acknowledges that it does not, has never, and indeed cannot regulate such mining. U.S. Br. 3, 13, 23. The federal government also admits that, notwithstanding the Atomic Energy Act (AEA), 42 U.S.C. §§ 2011 *et seq.*, States may regulate uranium mining, including by banning it altogether. U.S. Br. 18. Indeed,

the government even agrees that States may ban conventional uranium mining *based on concerns about the safety of the mining process itself*. See U.S. Br. 16 ("State regulation of conventional uranium mining is permissible if that regulation is grounded on concerns about mining itself, which is not subject to NRC regulation."); accord U.S. Br. 12-13, 18.

But even though States have plenary power over conventional uranium mining, the federal government argues that both lower courts erred—and the case should move forward—based on petitioners' allegations about the Virginia legislature's motives and a concession we have never made. As for the former, the government asserts that petitioners "have adequately alleged that . . . the Commonwealth has banned uranium mining not because of concerns about mining per se, but because of fears about radiological hazards associated with the next steps of the uranium-development process, which NRC regulates under the AEA." U.S. Br. 12. The government also suggests we "have conceded that, for purposes of [our] motion to dismiss," U.S. Br. 23, the courts should take as true petitioners' allegations that Virginia's moratorium was motivated "solely" by radiological safety concerns associated with milling and tailings. U.S. Br. 22. As a result, says the government, this Court "need not decide what evidence would be necessary or sufficient to prove those allegations" were the case to proceed beyond the motion-to-dismiss stage. U.S. Br. 23.

These arguments illustrate the weakness of the government's position and the untenable situation it

would create for States. They also highlight why this is a poor case for addressing the preemptive scope of the AEA. As this Court has explained in evaluating that very same statute, "inquiry into legislative motive"—itself always a potentially "unsatisfactory venture"—can be "particularly pointless" where (as here) there are no doubts about a State's ability to achieve a particular result and the only question is whether the State has relied on a proper justification for doing so. *Pacific Gas & Elec. Co.* v. *State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 216 (1983) (*Pacific Gas*). The problems will only be compounded if claims about what motivated a particular State's legislature to enact (or fail to repeal) a longstanding state policy are treated as allegations of fact that must be presumed true for purposes of a motion to dismiss. And the problems will only multiply if the list of state policies open to challenge is expanded to include not only those touching on matters regulated by the federal government but also state policies regulating activities that are, themselves, "subject to state rather than federal regulation." U.S. Br. 23.

Fortunately, there is no need for the Court to wade into those matters because there is no need for the Court to take this case. Both lower courts agreed about the proper outcome here, and their decisions upholding Virginia's three-decade-old moratorium on uranium mining do not conflict with either the decisions of this Court or another court of appeals. Nor does this petition for a writ of certiorari raise any issue of general importance. Despite vague expressions of concerns, see

U.S. Br. 22, the government identifies no tangible harms caused by Virginia's moratorium and no actual projects or activities that would be impeded were this Court simply to leave undisturbed the status quo that has prevailed since 1982. In short, "it is for Congress to rethink the division of regulatory authority in light of its possible exercise by the States to undercut a federal objective" and "[t]he courts should not assume the role which our system assigns to Congress." *Pacific Gas*, 461 U.S. at 223.

ARGUMENT

A. There is no conflict

The government suggests that the lower courts' resolution of this case conflicts with three others: this Court's decision in *Pacific Gas*; the Tenth Circuit's decision in *Skull Valley*;[1] and the Second Circuit's decision in *Entergy*.[2] U.S. Br. 19-21. But those cases are all distinguishable for the same basic reason: each arose directly out of activities that are themselves identified in the text of the AEA for regulation by the federal government. *Pacific Gas* involved the construction of new nuclear power plants. *Skull Valley* involved storage facilities for spent nuclear fuel. And *Entergy* involved rules governing existing nuclear power plants. This

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[1] *Skull Valley Band of Goshute Indians* v. *Nielson*, 376 F.3d 1223 (10th Cir. 2004), cert. denied, 546 U.S. 1060 (2005).

[2] *Entergy Nuclear Vt. Yankee, LLC* v. *Shumlin*, 733 F.3d 393 (2d Cir. 2013).

case, in contrast, involves conventional uranium mining—an entire category of activity that the federal government acknowledges remains "subject to state control." U.S. Br. 9; accord U.S. Br. 13, 16.

That distinction matters for reasons that are both textual and intensely practical. Textual because the clearest statutory basis for preemption based on the underlying "purpose" of a state regulation—42 U.S.C. § 2021(k)—is part of a broader provision whose entire function is to *expand* state regulatory authority by permitting States to regulate in areas that otherwise would be under exclusive federal control. Practical because all of the difficulties with—and disruptions threatened by—judicial inquiries into legislative motive would only be compounded by expanding their scope to include state regulation of "antecedent activit[ies]" (U.S. Br. 9) not otherwise under federal control. See *infra* Part B.

The claimed conflict with *Pacific Gas* also fails for another reason. Like the decision below—and like the two other decisions of this Court that followed it—*Pacific Gas* rejected a preemption claim and upheld the challenged state laws. 461 U.S. at 216; accord *English* v. *General Elec. Co.*, 496 U.S. 72, 90 (1990); *Silkwood* v. *Kerr-McGee Corp.*, 464 U.S. 238, 258 (1984). It is at least arguable that some of the language in *Pacific Gas* was "unnecessary to the Court's holding" and thus "dictum." *Pacific Gas*, 461 U.S. at 223-24 (Blackmun, J., concurring in part and concurring in the judgment). But regardless of how that question is answered, the fact remains that this Court has never invalidated a

state law based on the preemption theory urged here. For that reason, too, there is no "conflict[ ]" between the decision below and the "relevant decisions of this Court." S. Ct. R. 10(c).

B. This case is a poor vehicle for addressing preemption under the AEA

The government further errs in contending that "[t]his case presents a suitable vehicle to address the question presented." U.S. Br. 23. The linchpin of the government's vehicle analysis is its assertion that we "have conceded . . . for purposes of [our] motion to dismiss [that] the courts should take as true petitioners' allegation that the Virginia moratorium was motivated by radiological-safety concerns." U.S. Br. 23.

1. Because the point may prove critical were this Court to grant review, it is important to be clear about what we have and have not "conceded." Like any party who moves to dismiss for failure to state a claim, we "take all of the factual allegations in the complaint as true." *Ashcroft* v. *Iqbal*, 556 U.S. 662, 678 (2009). In various filings in this case, we also have assumed that "*one of the purposes* behind enacting [the moratorium] was to address potential radiological safety concerns." Resp't Mem. in Supp. of Mot. to Dismiss 15 (emphasis added; footnotes omitted).

That said, we have *never* conceded that legislative purpose is purely a question of fact (historical or otherwise). Nor have we conceded, even for purposes of the underlying motion to dismiss, that the Virginia

legislature's *sole* purpose in imposing a moratorium on conventional uranium mining was based on radiological safety concerns associated with uranium milling and tailings. See, *e.g.*, Reply in Supp. of Mot. to Dismiss & Resp. to Cross-Mot. for Summ. J. 8 n.9 (noting that "much of the evidence highlighted by the [petitioners] speaks not to radiation or radiological issues, but general concerns about health, safety and welfare").[3]

2. The government is similarly wrong in assuring the Court that it could simply assume that Virginia's law was wholly motivated by an allegedly improper purpose, while leaving for another day all thorny questions about "what evidence would be necessary or sufficient" to prove such allegations. U.S. Br.

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[3] The Fourth Circuit identified no basis for saying we "concede[d]" that the Commonwealth "lacks a non-safety rationale for banning uranium mining." Pet. App. 10a. Such a concession would be irrelevant in any event because the federal government acknowledges that Virginia may ban uranium mining based on safety concerns—even radiological safety concerns—so long as those concerns are grounded in the safety of the mining process rather than milling and tailings. See U.S. Br. 16.

As Judge Traxler noted in dissent, a footnote in our court of appeals' brief states—in response to a claim about what would happen if this case reached the summary judgment stage—that we have "conceded the truth of [petitioners'] claims about legislative motive only for purposes of their Rule 12(b)(6) motion." Resp. C.A. Br. 15 n.58 (cited in Pet. App. 29a n.9). Even if this statement could reasonably be construed as broader than others we have made about how Rule 12 operates—and it should not—this Court is not bound by "concessions" involving the proper operation of Rule 12(b)(6). See, *e.g.*, *Massachusetts* v. *United States*, 333 U.S. 611, 624 n.23 (1948) (explaining that this Court is "not bound to accept [a legal concession] as either sound or conclusive of the litigation. It is not, even in terms, a confession of error.").

23. For one thing, as explained above, respondents vigorously challenge the assumption that provides the predicate for those assurances.

But the government's assurances also are wrong because they attempt to skate over several difficult questions about how analysis of legislative purpose works in this context. For now, consider just two:

In this context, is legislative "purpose" a question of fact, a question of law, or a mixed question? In *Wyeth* v. *Levine*, 555 U.S. 555 (2009), for example, this Court analyzed Congress's purpose in a preemption case without giving any deference to (or even referencing) any trial court findings. *Id.* at 566-68, 573-81. In the voting rights context, however, this Court has treated legislative intent in drawing electoral districts as a factual question that is reviewed for clear error, and, as a result, state legislators often are deposed and forced to testify. See, *e.g.*, *Cooper* v. *Harris*, 137 S. Ct. 1455, 1466, 1473-75 (2017). The government's brief simply assumes that this context falls into the question-of-fact bucket. But none of this Court's previous decisions clearly answers that question.[4]

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[4] The government errs in describing *Pacific Gas* as "deferring to lower court's *factual* assessments" of the purpose of the challenged state law. U.S. Br. 15 (emphasis added). What this Court actually said was that its "general practice is to place considerable confidence in the *interpretations* of state law reached by *the federal courts of appeals*." *Pacific Gas*, 461 U.S. at 214 (emphasis added). Courts of appeals, of course, have no power to make factual findings.

Or take another question: What is the required relationship between an allegedly invalid purpose and any other purposes that may also have motivated the challenged state action? Does the challenger need to prove: (a) that the alleged improper purpose was the but-for cause of the legislative enactment, cf. *Hartman* v. *Moore*, 547 U.S. 250, 260 (2006); (b) that the improper purpose predominated over other valid purposes, cf. *Easley* v. *Cromartie*, 532 U.S. 234, 241 (2001); (c) that there is no rational purpose for the law other than the improper purpose, cf. *Nordlinger* v. *Hahn*, 505 U.S. 1, 6 (1992); or (d) something else? None of the Court's previous decisions in this area squarely address that question—though *Pacific Gas* says that where (as here) it is clear that Congress did not displace the States' traditional authority to reach a given outcome (here, a moratorium on conventional uranium mining) "it should be up to Congress to determine whether a State has misused the authority left in its hands." *Pacific Gas*, 461 U.S. at 216.

In our view, the better answers are that this type of inquiry is more akin to a legal question than a factual one and that the relevant materials show that the Virginia legislature had a variety of concerns in mind when enacting the moratorium. Pet. App. 178a, 182a-88a. The government's question-of-fact position ignores the profound difficulties posed by attempting to discover facts underlying a nearly 40-year-old enactment by a state legislature that maintains a paucity of legislative history. Even more troublingly, the question-of-fact view could create the untenable situation

where district courts reach different conclusions about whether a given state law is preempted and those differing conclusions are then subject to clear-error review on appeal. Cf. *U.S. Bank N.A.* v. *Vill. at Lakeridge, LLC*, No. 15-1509, slip op. at 8 (Mar. 5, 2018) ("[W]hen applying the law involves developing auxiliary legal principles of use in other cases[,] appellate courts should typically review a decision *de novo*."). But regardless of whether this Court agrees with our assessment, those are the types of questions that would need to be answered before petitioners could be granted any relief.

3. It also is worth noting the breadth of the federal government's position. In its view, a preemption challenge to a state law regulating an activity committed entirely to the States' control could survive a motion to dismiss as long as the plaintiff alleges an improper legislative motive for passing an otherwise facially valid law. Such a rule would permit virtually any preemption challenge to advance to discovery, subjecting the State and its officials to potentially intrusive inquiries about what motivated a state legislature to adopt a law regulating activities that are themselves entirely unregulated by the federal government. But "[t]he allocation of powers in our federal system preserves the integrity, dignity, and residual sovereignty of the States," *Bond* v. *United States*, 564 U.S. 211, 221 (2011), and the federal government offers nothing but speculation to justify why such an intrusion in state sovereignty is necessary. This is especially true given that Congress retains ample authority "to rethink the

division of regulatory authority" if it disagrees with Virginia's longstanding policies about conventional uranium mining. *Pacific Gas*, 461 U.S. at 223.[5]

C. This case raises no issue of general or urgent importance

It bears repeating that Virginia's moratorium on conventional uranium mining has been in place since President Reagan's first term and went completely unchallenged until the end of the second Obama Administration. At worst, that sort of delay could give rise to a defense of laches or the like. But even at best, it badly undermines any claim about the urgency of this issue.

The federal government has not identified any pressing need for this Court's intervention. The government makes no claim that the actual policy at issue in this case—Virginia's moratorium on conventional uranium mining—is, has, or can be expected to cause any harm whatsoever to the national interest. Tellingly, the government offers no support to petitioners' overheated claims of dire harm to "our economy [and]

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[5] As we pointed out to both courts below, Congress undertook a substantial revision of the AEA early this century with the passage of the 2005 Energy Policy Act without disturbing the uranium mining moratorium in Virginia or any other State. See, *e.g.*, Resp't Mem. in Supp. of Mot. to Dismiss 11. This too undermines the federal government's implicit contention that the "clear and manifest purpose of Congress" was to displace Virginia's exercise of its sovereign police power. *Pacific Gas*, 461 U.S. at 206.

national security." Compare Pet. Cert. Reply 10-12, with U.S. Br. 22.[6]

The government vaguely suggests that the question presented here is "likely to recur in other nuclear-safety contexts," U.S. Br. 9, and that "the Fourth Circuit's analysis" *might* permit other States to take other steps that *might* be harmful to federal interests. U.S. Br. 22. But the government fails to identify any concrete state policies that have been enacted—or even general proposals that have been made—during the 14 months since the Fourth Circuit's decision in this case or the 28 months since the district court's decision. Better to let sleeping dogs lie.

---

[6] Nor could it, given the Nuclear Regulatory Commission's plenary power to conduct mining operations to meet national security needs. See 42 U.S.C. § 2096.

CONCLUSION

The petition for a writ of certiorari should be denied.

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VIRGINIA URANIUM, INC., ET AL., PETITIONERS

v.

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ON WRIT OF CERTIORARI
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QUESTION PRESENTED

Whether the Atomic Energy Act of 1954 (AEA), 42 U.S.C. 2011 *et seq.*, preempts state laws that prohibit activities within a State's regulatory jurisdiction (here, conventional uranium mining) when such laws are grounded in radiological-safety concerns about related activities that are federally regulated under the AEA (here, the milling of uranium ore and disposal of "tailings" byproduct).

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In the Supreme Court of the United States

No. 16-1275

VIRGINIA URANIUM, INC., ET AL., PETITIONERS

v.

JOHN WARREN, ET AL.

ON WRIT OF CERTIORARI
TO THE UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT

BRIEF FOR THE UNITED STATES AS AMICUS CURIAE SUPPORTING PETITIONERS

INTEREST OF THE UNITED STATES

This case concerns whether the Atomic Energy Act of 1954 (AEA), 42 U.S.C. 2011 *et seq.*, preempts a state law that prohibits an activity within a State's regulatory jurisdiction, when such a law is motivated by radiological-safety concerns about related activities that are federally regulated under the AEA. Because this case directly implicates federal regulatory responsibilities, the United States has a substantial interest in the Court's resolution of the preemption issue. At the Court's invitation, the United States filed an amicus brief at the petition stage of this case.

STATEMENT

A. Regulatory Background

1. In 1946, Congress created a federal-government monopoly over the production, ownership, and use of "fissionable material," including enriched uranium and

other materials that are "capable of releasing substantial quantities of energy through nuclear chain reaction." Atomic Energy Act of 1946 (1946 Act), ch. 724, §§ 1(b)(4), 5(a)(1), 60 Stat. 756, 760. To implement this federal monopoly, Congress restricted the transfer, delivery, and receipt of nuclear "source materials" like uranium. § 5(b)(1) and (2), 60 Stat. 761.

In 1954, through the AEA, 42 U.S.C. 2011 *et seq.*, Congress eliminated the federal government's monopoly over the "use, control, and ownership of nuclear technology," *Pacific Gas & Elec. Co.* v. *State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 206 (1983) (*Pacific Gas*), in order "to encourage widespread participation in the development and utilization of atomic energy for peaceful purposes to the maximum extent consistent with the common defense and security and with the health and safety of the public," 42 U.S.C. 2013(d). The AEA preserves the States' authority to regulate "with respect to the generation, sale, or transmission of electric power produced through the use of nuclear facilities licensed by the [NRC]." 42 U.S.C. 2018; see Act of Aug. 30, 1954 (1954 Act), ch. 1073, § 1, 68 Stat. 921. In 1965, Congress clarified that the AEA's preservation of state regulatory authority "shall not be deemed to confer upon any Federal, State, or local agency any authority to regulate, control, or restrict any activities of the [NRC]." 42 U.S.C. 2018; see Act of Aug. 24, 1965, Pub. L. No. 89-135, 79 Stat. 551.

In order to promote private-sector development of nuclear energy, subject to strict federal control, Congress has fashioned a comprehensive scheme for the regulation and development of nuclear energy. *Pacific Gas*, 461 U.S. at 193; see *Duke Power Co.* v. *Carolina*

Envtl. Study Grp., Inc., 438 U.S. 59, 63 (1978). Responsibility for implementing the AEA is currently shared among the Nuclear Regulatory Commission (NRC), which serves as the principal licensing and safety regulator, see 42 U.S.C. 5841-5845; the U.S. Department of Energy (DOE), which oversees federal research and promotional activities, see 42 U.S.C. 5811-5813, 7151(a); and the Environmental Protection Agency (EPA), which establishes generally applicable standards for certain radiation hazards, see, *e.g.*, 42 U.S.C. 2022.[1]

Among other responsibilities, NRC licenses and regulates the transfer, possession, use, and disposal of nuclear materials throughout the nuclear fuel cycle, as needed to "promote the common defense and security" and to "protect health or to minimize danger to life or property." 42 U.S.C. 2201(b). "[S]ource material," including uranium, is regulated upon removal from its place of deposit in nature. 42 U.S.C. 2092; see 42 U.S.C. 2014(z) (defining "'source material'" to include "uranium"); 10 C.F.R. 40.4 (same). "[N]o person may transfer or receive in interstate commerce * * * any source material after removal from its place of deposit in nature" unless such actions are "authorized by a general or specific license issued by [NRC]." 42 U.S.C. 2092; see 42 U.S.C. 2093, 2099; 10 C.F.R. Pt. 40 (implementing regulations).

The AEA requires similar licenses for the transfer or possession of "'special nuclear material,'" which includes uranium that has been "enriched in the isotope 233 or in the isotope 235." 42 U.S.C. 2014(aa); see 42 U.S.C. 2073-2074 (2012 & Supp. III 2015) (licensing requirements); 10 C.F.R. Pt. 70 (implementing regulations). The AEA

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[1] Those functions were allocated among NRC, DOE, and EPA in the 1970s, after the Atomic Energy Commission was abolished. See *Huffman* v. *Western Nuclear, Inc.*, 486 U.S. 663, 666 n.4 (1988).

also requires licenses for the transfer or possession of any "byproduct material" that is generated during nuclear-fuel production or use. See 42 U.S.C. 2014(e)(1)-(4) (defining several categories of "byproduct material"); 42 U.S.C. 2111-2114 (licensing requirements); 10 C.F.R. Pts. 30-39 (implementing regulations). NRC also requires licenses for the operation of nuclear utilization and production facilities, including nuclear power plants, uranium-enrichment facilities, and fuel-fabrication facilities, as well as spent-nuclear-fuel storage installations. See 42 U.S.C. 2014(v) and (cc), 2131-2133; 10 C.F.R. Pts. 50, 52, 72 (implementing regulations).

2. Nuclear source material may be obtained through several means. This case concerns conventional uranium recovery, through which uranium ore is excavated from the ground through open-pit or underground mining and then subjected to above-ground chemical processing. Pet. App. 4a. NRC does not regulate the physical excavation of uranium ore through conventional mining (as opposed to other, "in situ" methods of uranium recovery). See *In re Hydro Res., Inc.*, 63 N.R.C. 510, 512-513 (2006).[2] NRC requirements begin to apply once uranium is removed from its "place of deposit in nature." 42 U.S.C. 2092; 10 C.F.R. 40.3.; p. 3, *supra*.[3]

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[2] "In situ" recovery involves injecting chemicals directly into the earth and pumping the resulting uranium-infused solution to the surface. Pet. App. 4a n.1, 54a-55a. This method is feasible only in certain geological settings, which are not alleged to be present in Virginia. *Id.* at 22a n.2 (Traxler, J., dissenting). NRC regulates the process of "in situ" recovery. See *In re Hydro Res., Inc.*, 63 N.R.C. at 512-513.

[3] NRC has exempted from regulation "unrefined and unprocessed ore containing source material," but any such ore may not be refined or processed without a license. 10 C.F.R. 40.13(b); see 10 C.F.R.

Once excavated, the uranium ore is transferred by truck or conveyor belt to a nearby mill for processing. See U.S. NRC, *Conventional Uranium Mills* (May 15, 2017), https://www.nrc.gov/materials/uranium-recovery/extraction-methods/conventional-mills.html. "Uranium mills are a part of the nuclear fuel cycle," as "[t]hey extract uranium from ore for eventual use in nuclear weapons and powerplants." H.R. Rep. No. 1480, 95th Cong., 2d Sess. Pt. 2, at 25 (1978). "[M]illing" involves physically grinding the ore into particles and then applying chemicals that separate the uranium from the surrounding rock. Pet. App. 54a-55a. This process generates a small quantity of concentrated uranium known as "'yellowcake,'" as well as a large amount of sandy waste known as "[t]ailings." *Id.* at 4a, 54a-55a & n.2 (citation omitted); see H.R. Rep. No. 1480, 95th Cong., 2d Sess. Pt. I, at 11 (1978) (noting that milling 2000 pounds of uranium ore yields "only 1 to 5 pounds of usable uranium"). Tailings are classified as a "byproduct material" under the AEA. 42 U.S.C. 2014(e)(2).

The yellowcake is "sold and shipped off-site for enrichment," Pet. App. 23a (Traxler, J., dissenting), while the tailings are typically stored at a nearby site. Because uranium mill tailings contain several substances that are potentially hazardous to human health, *id.* at 205a, 210a, they are subject to extensive federal regulation. EPA is responsible for promulgating generally applicable health, safety, and environmental standards associated with the processing and disposal of uranium mill tailings. 42 U.S.C. 2022(b)(1)-(2); see 40 C.F.R. Pt. 192 (containing

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40.4 (defining "[u]nrefined and unprocessed ore" as "ore in its natural form prior to any processing, such as grinding, roasting or beneficiating, or refining") (emphases omitted).

standards).[4] NRC implements those standards through regulations and site-specific licensing conditions. 42 U.S.C. 2111 (requiring licenses for byproduct materials); 10 C.F.R. 40.1-40.3, 40.20-40.21, 40.26-40.28, 40.31(h), 40.32, 40.51 (regulating tailings "[b]yproduct [m]aterial" as defined in 10 C.F.R. 40.4); 10 C.F.R. Pt. 40 App. A (establishing "criteria relating to the operation of uranium mills and the disposition of tailings or wastes" from milling) (capitalization omitted).

3. In 1959, Congress amended the AEA to "clarify the respective responsibilities * * * of the States and the [federal government] with respect to the regulation of byproduct, source, and special nuclear materials." 42 U.S.C. 2021(a)(1); see Act of Sept. 23, 1959, Pub. L. No. 86-373, 73 Stat. 688. That amendment empowered NRC to enter agreements that authorize States to license and regulate the transfer, possession, use, and disposal of nuclear source material, byproduct material, and/or sub-critical quantities of special nuclear material. 42 U.S.C. 2021(b). NRC approves such an agreement under Section 2021 if the State has developed a regulatory program that is both "adequate to protect the public health and safety with respect to the materials within the State covered by the proposed agreement" and "compatible with [NRC's] program for the regulation of such materials." 42 U.S.C. 2021(d)(1)-(2). A State that enters

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[4] For example, EPA has specified technical requirements for the design of surface impoundments that store tailings, 40 C.F.R. 192.32(a)(1); set maximum allowable groundwater concentrations for specified hazardous substances, 40 C.F.R. 192.32(a)(2); required the installation of a "permanent radon barrier" around nonoperational impoundments, 40 C.F.R. 192.32(a)(3)(i); and mandated monitoring and analysis of radon levels, 40 C.F.R. 192.32(a)(4).

into a Section 2021 agreement may "regulate the materials covered by the agreement for the protection of the public health and safety from radiation hazards." 42 U.S.C. 2021(b); S. Rep. No. 870, 86th Cong., 1st Sess. 12 (1959) (*Senate Report*) (stating that, absent such an agreement, NRC "has exclusive authority to regulate for protection against radiation hazards").

Certain responsibilities, including regulation of "the construction and operation" of nuclear power plants and uranium-enrichment facilities, are reserved to NRC and cannot be delegated to a State. 42 U.S.C. 2021(c). With respect to those responsibilities, Section 2021 gives States an advisory role, allowing them to be heard by NRC before such activities commence within a State. 42 U.S.C. 2021(*l*). Section 2021 also contains a savings clause, which provides that "[n]othing in this section shall be construed to affect the authority of any State or local agency to regulate activities *for purposes other than protection against radiation hazards*." 42 U.S.C. 2021(k) (emphasis added).

B. The Virginia Law

1. In the late 1970s, the "largest known uranium deposit in the United States" was discovered in Pittsylvania County, Virginia. Pet. App. 5a, 216a. Following that discovery, the Virginia General Assembly directed a commission to "evaluate the environmental effects of uranium exploration, mining and milling," and to identify "any possible detriments" from those activities to the "health, safety, and welfare of Virginia citizens." 1981 Va. Acts 1404 (Pet. App. 169a-170a). In 1982, the General Assembly enacted a law that permitted uranium exploration but imposed a one-year moratorium on uranium mining. See 1982 Va. Acts 426 (Pet. App. 170a-177a).

In 1983, the General Assembly extended the moratorium indefinitely. See 1983 Va. Acts 3 (1983 Act) (Pet. App. 177a-189a). It found that, "while uranium mining and milling activity can generate substantial benefits, it also raises a wide range of environmental and other local concerns." Pet. App. 178a. The 1983 Act directed that "permit applications for uranium mining shall not be accepted by any agency of the Commonwealth * * * until a program for permitting uranium mining is established by statute." *Id.* at 177a-178a (emphasis omitted). The 1983 Act also created a working group to consider, *inter alia*, the costs and benefits of permitting development of the Pittsylvania deposit, including consideration of the risk that "radionuclides" generated by "mining, milling and tailings management" could contaminate the surrounding water, air, and plant and animal life. *Id.* at 183a-184a.

In 1985, the commission and working group issued their final report. Pet. App. 219a. The working group observed that "there was no area where [it] had greater concern than on the potential effects of radiation which would be produced by [a] uranium development facility." D. Ct. Doc. 48-14, at 15 (Sept. 11, 2015). A majority of participants recommended lifting the moratorium, but only if the General Assembly "simultaneously" adopted certain recommendations "to assure adequate state regulation of uranium mining and milling." D. Ct. Doc. 48-17, at 8 (Sept. 11, 2015). Those included the "essential" recommendation that Virginia become an "agreement state" under Section 2021, with the right to regulate milling and tailings storage, *id.* at 6; cf. 42 U.S.C. 2021, as well as proposed technical limits on radiological emissions from milling and tailings-storage activities,

see D. Ct. Doc. 48-17, at 6-7. Despite those recommendations, the General Assembly neither lifted the moratorium nor enacted a "comprehensive mining, milling and tailing statute." See D. Ct. Doc. 48-14, at 7.

In 2009, Virginia signed a Section 2021 agreement with NRC. The Commonwealth thereby acquired regulatory authority over "[s]ource materials," "[s]pecial nuclear materials," and specified categories of "[b]yproduct materials" within the Commonwealth, Pet. App. 300a; see *id.* at 298a-305a; but the agreement expressly excluded the regulation of uranium mill tailings, see *id.* at 301a (excluding "[t]he regulation of byproduct material as defined in Section 11e.(2) of the [AEA]"); cf. 42 U.S.C. 2014(e)(2) (classifying tailings as byproduct material).

2. For several decades after the discovery of the Pittsylvania County uranium deposit, the owners of that deposit did not pursue efforts to overturn the Commonwealth's mining moratorium. In the mid-2000s, however, uranium prices rose sharply and the landowners lobbied for a repeal of the ban. Pet. App. 222a. The General Assembly, the Governor, and Commonwealth agencies commissioned studies addressing the feasibility, benefits, and risks of potential uranium development. See *id.* at 222a-223a, 227a-228a. In 2013, bills to lift the moratorium were introduced in the General Assembly, but those legislative efforts failed. *Id.* at 228a-229a.

C. The Proceedings Below

Petitioners are the current landowners of the Pittsylvania County uranium deposit. In 2015, petitioners brought suit in federal district court, asserting that the Commonwealth's moratorium was preempted by

the AEA, and seeking declaratory and injunctive relief. Pet. App. 190a-238a.

1. The district court dismissed petitioners' complaint for failure to state a claim. Pet. App. 53a-82a. The court noted petitioners' allegation that the moratorium rested on "radiological safety concerns" associated with milling and tailings management. *Id.* at 68a. The court concluded, however, that the moratorium was not preempted because it applied only to mining, and conventional uranium mining is not regulated by NRC. *Id.* at 71a-80a. The court recognized that the mining ban "might obviate one's decision to mill and manage the mill tailings" in Virginia, but it suggested that "such a consequence [wa]s too far attenuated" to result in preemption. *Id.* at 80a.

2. The court of appeals affirmed. Pet. App. 1a-52a.

a. The court of appeals agreed with the district court that petitioners had failed to state a claim that Virginia's moratorium is preempted. Pet. App. 13a-19a. The court of appeals recognized that "uranium milling and tailings storage" are "regulated by the NRC," and that under Section 2021(k), "[S]tates may therefore not regulate them except for purposes other than protection against radiation hazards." *Id.* at 13a-14a. The court found it dispositive, however, that "the plain language of the Commonwealth's ban does not mention uranium milling or tailings storage," and it declined to "look past the statute's plain meaning to decipher whether the legislature was motivated to pass the ban by a desire to regulate uranium milling or tailings storage." *Id.* at 14a. The court described this Court's decision in *Pacific Gas*, *supra*, as "warn[ing] against the 'unsatisfactory venture' of 'inquiry into legislative motive.'" Pet. App. 14a (quoting *Pacific Gas*, 461 U.S. at

216). The court of appeals also stated that it would be pointless to invalidate the statute based on a finding of improper purpose because the Commonwealth could simply reenact the law "with a different motive." *Ibid.*

The court of appeals further held that Virginia's moratorium was not preempted under conflict-preemption principles. Pet. App. 18a-19a. The court concluded that the moratorium would not pose an obstacle to Congress's objective of encouraging the development and use of nuclear energy because most uranium used in the United States' atomic-energy industry is imported, and because many uranium-extraction facilities in the United States—those on federal lands and those that use "in situ" recovery—are already licensed by NRC and thus beyond the reach of any state ban. *Id.* at 19a.

b. Judge Traxler dissented. Pet. App. 20a-52a. He explained that "established Supreme Court law makes clear that the AEA preempts state statutes enacted for the purpose of protecting against the radiological dangers of activities the AEA regulates," including "uranium milling and tailings management." *Id.* at 52a; see *id.* at 32a-38a. He further noted that, if the allegations in petitioners' complaint were taken as true, the Commonwealth had "banned uranium mining only as a means to prevent milling and tailings management from occurring in Virginia." *Id.* at 27a; see *id.* at 21a n.1, 40a-41a. Because "Congress has taken away a state's ability to limit mining for th[at] particular reason," *id.* at 20a, Judge Traxler concluded that petitioners had stated a valid preemption claim.

Judge Traxler further concluded that petitioners had stated a claim of preemption under conflict-preemption principles. He explained that a uranium-mining ban premised on radiological-safety concerns

would stand as an obstacle to the accomplishment of Congress's objective to permit the private sector to develop nuclear energy "to the maximum extent consistent with the common defense and security and with the health and safety of the public." Pet. App. 47a (quoting 42 U.S.C. 2013(d)). He expressed the view that Virginia had sought to prevent the private sector from developing nuclear energy because the State did "not trust[] that the federal government has sufficiently protected against the radiological dangers of uranium milling and tailings management." *Id.* at 47a-48a.

SUMMARY OF ARGUMENT

I. Petitioners have alleged that Virginia's uranium-mining moratorium is motivated by concern that uranium milling and tailings-management activities may pose nuclear-safety risks. If that allegation is true, the moratorium is preempted because Congress has entrusted such nuclear-safety regulation exclusively to the federal government. The courts below therefore erred in ordering, and upholding, dismissal of petitioners' complaint.

A. The AEA's text and structure demonstrate Congress's intent to reserve for the federal government control over the management of all radiation hazards stemming from activities licensed under the statute. The accompanying legislative history and subsequent agency interpretations confirm the federal government's primacy in this field.

B. The AEA's preemptive effect depends in part on the purpose of the state law at issue. State laws that are "grounded in safety concerns" about AEA-regulated activities encroach upon the field occupied by the federal government, even if the State purports to act within an area of traditional state authority. *Pacific Gas & Elec.*

Co. v. *State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 213 (1983). That purpose-based approach to field preemption in this sphere is rooted in the text of Section 2021(k), which preserves the States' authority to regulate certain activities "for purposes other than protection against radiation hazards." 42 U.S.C. 2021(k).

C. Petitioners have credibly alleged that Virginia banned uranium mining for the purpose of guarding against the radiation hazards posed by uranium milling and tailings management, which are activities regulated under the AEA. Accordingly, petitioners' complaint should not have been dismissed.

II. If Virginia's uranium-mining ban rests on a legislative judgment that uranium milling and tailings management cannot be conducted safely, it is preempted for the additional reason that it conflicts with federal law.

A. In enacting the AEA, Congress sought to ensure that nuclear technology would be safe enough for widespread development and use. State regulation premised on a contrary judgment that an aspect of nuclear development cannot safely be undertaken stands as an obstacle to the accomplishment and execution of Congress's objectives.

B. The AEA establishes alternative mechanisms through which States can participate in federal regulation of nuclear development. Allowing a State to address radiation hazards by banning uranium mining would conflict with Congress's decision that States should utilize other specific methods to participate in that regulatory process.

ARGUMENT

Because federal law is "the supreme Law of the Land," U.S. Const. Art. VI, Cl. 2, congressional enactments can preempt otherwise permissible state laws. See, *e.g.*, *English* v. *General Elec. Co.*, 496 U.S. 72, 78 (1990). In the absence of express statutory language that defines the scope of a federal law's preemptive effect, state law can be preempted in two ways. *Id.* at 79. First, "state law is pre-empted where it regulates conduct in a field that Congress intended the Federal Government to occupy exclusively." *Ibid.* Second, state law is "pre-empted to the extent that it actually conflicts with federal law," including when "state law 'stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress.'" *Ibid.* (citation omitted).

Under the AEA, the federal government "has occupied the entire field of nuclear safety concerns, except [for] the limited powers expressly ceded to the States." *Pacific Gas & Elec. Co.* v. *State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 212 (1983). If, as petitioners allege, Virginia banned uranium mining as a means of addressing the radiological hazards associated with uranium milling and tailings management, the Virginia law would fall squarely within the preempted field, even though the immediate object of the ban (uranium mining) is outside the NRC's jurisdiction. A state law motivated by such concerns would also conflict with Congress's determination—buttressed by the conclusions of the expert technical agencies assigned responsibility for such matters—that uranium milling and tailings management can be conducted safely under federal regulation.

I. THE ATOMIC ENERGY ACT OCCUPIES THE FIELD OF NUCLEAR-SAFETY REGULATION, AND IT PREEMPTS ANY STATE URANIUM-MINING BAN THAT IS MOTIVATED BY CONCERNS ABOUT THE RADIOLOGICAL SAFETY OF FEDERALLY REGULATED URANIUM MILLING AND TAILINGS MANAGEMENT

A. The Federal Government Has Exclusive Authority To Regulate Nuclear Safety Except To The Extent That It Has Delegated That Authority To States

1. Through the AEA, the federal government "occupie[s] the entire field of nuclear safety concerns, except [for] the limited powers expressly ceded to the States." *Pacific Gas*, 461 U.S. at 212. Congress first regulated nuclear safety in 1946 by creating a "program for Government control" of nuclear technology that excluded both the private sector and the States. 1946 Act § 1(b)(4), 60 Stat. 756.

When Congress ended that monopoly in 1954 to permit private development of nuclear energy, it did not relinquish federal control over the safety risks related to nuclear energy production, but instead concluded that nuclear source materials must continue to "be regulated in the national interest in order to provide for the common defense and security and to protect the health and safety of the public." 42 U.S.C. 2012(d); see 1954 Act § 2(d), 68 Stat. 921. The 1954 Act created a comprehensive regulatory and licensing scheme that vested a federal agency with responsibility for the radiological safety of each aspect of the nuclear fuel cycle. See pp. 2-6, *supra*. Although States retained their traditional authorities with respect to "the generation, sale, [and] transmission of electric power," 42 U.S.C. 2018; see 1954

Act § 271, 68 Stat. 960, "no significant role was contemplated for the States" regarding "'national security, public health, and safety,'" *English*, 496 U.S. at 81.

In 1959, by establishing the Section 2021 agreement program, Congress created a limited path for States to manage the radiation hazards of activities licensed under the AEA. 42 U.S.C. 2021(b). Under Section 2021, NRC may delegate to a State NRC's regulatory jurisdiction over the transfer, possession, use, and disposal of nuclear source material (including uranium ore), byproduct material (including tailings), and small quantities of special nuclear material (such as enriched uranium). *Ibid.*; see 42 U.S.C. 2014(e)(2) and (z). Pursuant to such an agreement, the State may "regulate the materials covered by the agreement for the protection of the public health and safety from radiation hazards." 42 U.S.C. 2021(b).

In establishing that cooperative program and "clarify[ing] the respective responsibilities under [the AEA] of the States and the [NRC] with respect to the regulation of byproduct, source, and special nuclear materials," 42 U.S.C. 2021(a)(1), Congress provided that nothing in the Section 2021 program would affect the authority of States "to regulate activities for purposes *other than protection against radiation hazards*." 42 U.S.C. 2021(k) (emphasis added). The italicized language "underscore[s] the distinction * * * between the spheres of activity left respectively to the Federal Government and the States." *Pacific Gas*, 461 U.S. at 210. Under that division of responsibilities, absent an agreement between a State and the federal government, "the Federal Government maintains complete control of the safety and 'nuclear' aspects of energy generation," while "the States exercise their traditional authority over the need for additional generating capacity, the

type of generating facilities to be licensed, land use, ratemaking, and the like." *Id.* at 212; see *id.* at 205.

2. The legislative history of the 1959 AEA amendments confirms Congress's intent that the federal government would maintain its primacy in the field of nuclear safety, even with the introduction of state regulation through Section 2021 agreements. The Joint Committee on Atomic Energy explained that Section 2021(k) was "intended to make it clear that the bill does not impair the State authority to regulate activities of AEC [Atomic Energy Commission] licensees for the manifold health, safety, and economic purposes *other than radiation protection.*" *Senate Report* 12 (emphasis added). Under that approach, the federal government would retain "exclusive authority to regulate for protection against radiation hazards until such time as the State enters into an agreement with the Commission to assume such responsibility." *Ibid.* That explanation reinforces the conclusion that Congress intended to maintain federal control over radiological safety risks, except where the authority to regulate such risks has been delegated to a State by agreement. Absent such an agreement, States would remain free to regulate the activities of AEC licensees, but not for the purpose of protecting against radiological safety risks.

3. An interpretation by the AEC, the federal agency originally charged with regulating nuclear safety under the AEA, further confirms federal supremacy in the regulation of radiological safety risks. In 1969, the AEC issued a regulation setting forth its general counsel's understanding of Section 2021(k). The regulation states that Congress, "in enacting [Section 2021(k)], intended to preempt to the Federal Government the total respon-

sibility and authority for regulating, from the standpoint of radiological health and safety, the specified nuclear facilities and materials." 34 Fed. Reg. 7273, 7274 (May 3, 1969).[5] That understanding reinforces the conclusion that Congress left no room for States to encroach upon the preempted radiological-safety field.

B. State Laws That Are Grounded In Nuclear-Safety Concerns About AEA-Regulated Activities Are Preempted

This Court has addressed the AEA's preemptive reach on several occasions and has determined that the statute's preemptive effect depends in part on the purpose of the state law at issue. Under that framework, state laws that are "grounded in safety concerns" about AEA-regulated activities like uranium milling and tailings management encroach upon the field occupied by the federal government and are preempted. *Pacific Gas*, 461 U.S. at 213.

1. In *Pacific Gas*, the Court considered a California law that banned new construction of nuclear power plants until a method for permanent disposal of nuclear waste became available. 461 U.S. at 198. After reviewing the relevant statutory provisions and legislative history, the Court concluded that "the Federal Government has occupied the entire field of nuclear safety concerns, except [for] the limited powers expressly ceded to the States." *Id.* at 212; see *Silkwood* v. *Kerr-McGee Corp.*, 464 U.S. 238, 240-241 (1984) (explaining that the Court in *Pacific Gas* had "examined the relationship between federal and state authority in the nuclear energy

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[5] This rule was codified at 10 C.F.R. 8.4. Although 10 C.F.R. Part 8 was subsequently removed, NRC "continues to adhere to the substance of the interpretation in § 8.4." 77 Fed. Reg. 21,625, 21,627 (Apr. 11, 2012).

field" and had "concluded that States are precluded from regulating the safety aspects of nuclear energy").

The Court observed that the AEA gives NRC "exclusive jurisdiction to license the transfer, delivery, receipt, acquisition, possession, and use of nuclear materials," *Pacific Gas*, 461 U.S. at 207, and permits state regulation of such materials only if authorized by agreement, *id.* at 208-209. The court also explained that the AEA's preservation of state authority to "regulate activities for purposes other than protection against radiation hazards," 42 U.S.C. 2021(k), "underscored the distinction" drawn by Congress "between the spheres of activity left respectively to the Federal Government and the States." 461 U.S. at 210. Under that division of responsibility, the federal government "regulate[s] the radiological safety aspects involved" in AEA-regulated activities—there, the "construction and operation of a nuclear plant"—while the States retain their "traditional responsibility" to "determin[e] questions of need, reliability, cost, and other related state concerns" not involving radiological safety. *Id.* at 205.

The *Pacific Gas* Court observed that California had not sought to regulate the ***manner*** in which a nuclear power plant should be constructed or operated, which would conflict with NRC's exclusive regulatory authority over plant construction and operation and would thus be preempted whether the State had acted out of concern for radiological-safety hazards or for some other reason. 461 U.S. at 212; see 42 U.S.C. 2021(c)(1). Rather, California had sought to regulate the antecedent question ***whether*** a plant should be constructed, not ***how*** it should be constructed. 461 U.S. at 212. California had argued that, "although safety regulation of nuclear plants by

States is forbidden," the State could exercise its traditional authority over generation to ban new construction of power plants "until [the State's] safety concerns are satisfied." *Ibid.*; see 42 U.S.C. 2018 (preserving States' authority to regulate "with respect to the generation, sale, or transmission of electric power produced through the use of nuclear facilities licensed by the [NRC]").

This Court "reject[ed] th[at] line of reasoning." *Pacific Gas*, 461 U.S. at 212. The Court explained that, because the federal government had "occupied the entire field of nuclear safety concerns," "[a] state moratorium on nuclear construction grounded in safety concerns [would] fall[] squarely within the prohibited field." *Id.* at 212-213. The Court found that California's moratorium on construction of new power plants survived preemption only because the State had plausibly explained—with reference to legislative reports prepared during the passage of the moratorium—that the purpose of its legislation was to address "economic problems, not radiation hazards." *Id.* at 213; see *id.* at 213-216. In reaching that conclusion, however, the Court made clear that, by giving NRC exclusive responsibility to address nuclear-safety risks, Congress had preempted States from regulating to protect against radiation hazards, even when a State purports to act within the scope of its traditional authority. *Id.* at 212.

2. In its subsequent decision in *English*, *supra*, the Court explained that the AEA establishes two related forms of field preemption. 496 U.S. at 84. Observing that *Pacific Gas* had "defined the pre-empted field, in part, by reference to the motivation behind the state law," the Court reaffirmed that a state law "motivated by safety concerns" about AEA-regulated activities is preempted. *Ibid.* The Court noted that this purpose-

based "approach to defining the field" finds support in the text of Section 2021(k), which recognizes continued state authority "to regulate activities for purposes other than protection against radiation hazards." *Ibid.* (quoting 42 U.S.C. 2021(k)).

The Court in *English* further defined the preempted field to include state regulations that are "'enacted out of nonsafety concerns'" but have a sufficiently "direct and substantial effect" on NRC licensees' decisions "concerning radiological safety levels." 496 U.S. at 84-85 (quoting *Pacific Gas*, 461 U.S. at 212). Thus, "even as * * * part of the pre-empted field is defined by reference to the purpose of the state law in question," another part "is defined by the state law's actual effect on nuclear safety." *Id.* at 84 (recognizing that "a finding of safety motivation" was sufficient, but not necessary, to "place a state law within the pre-empted field").[6] The Court in *English* thus reaffirmed that state law is preempted if it is grounded in concerns about the radiation hazards of activities and materials that are regulated under the AEA—a field occupied by the federal government. *Id.* at 84-85.

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[6] The Court in *English* held that the state-law claim at issue, a tort claim for intentional infliction of emotional distress brought by an employee of a nuclear-fuels production facility, was not preempted under either of those rationales. The Court concluded that the relevant state law was not "motivated by safety concerns," and that the effect of imposing tort liability for intentional infliction of emotional distress would be neither "direct nor substantial enough" to cause employers to alter radiological-safety protocols. 496 U.S. at 84-85.

C. Because Petitioners Have Credibly Alleged That Virginia's Uranium-Mining Ban Was Motivated By Nuclear-Safety Concerns About Federally Regulated Milling And Tailings Management, Their Complaint Should Not Have Been Dismissed

Respondents conceded below that, for purposes of their motion to dismiss petitioners' complaint, Federal Rule of Civil Procedure 12(b)(6) "required [respondents] to accept as true that Virginia enacted the [uranium-mining] moratorium based on radiological safety concerns." J.A. 216. The court of appeals therefore erred in affirming the district court's dismissal of petitioners' complaint. Because petitioners have credibly alleged that the ban is grounded in radiological-safety concerns about uranium milling and tailings management, which are within the federal government's regulatory jurisdiction, and because regulation of those activities for radiological-safety purposes has not been delegated to Virginia in a Section 2021 agreement, petitioners' complaint states a claim that the ban is preempted. That is so despite the fact that conventional uranium mining itself is not regulated by NRC.

1. Petitioners have adequately alleged that Virginia's moratorium falls within the preempted "field of nuclear safety concerns." *English*, 496 U.S. at 82 (citation omitted). Petitioners contend that the Commonwealth has banned uranium mining not because of concerns about mining per se, but because of fears about radiological hazards associated with the next steps of the uranium-development process, which NRC regulates under the AEA. Petitioners have alleged that the "true design" of the moratorium is "to act as an absolute bar on the construction of a tailings management facil-

ity," which Virginia legislators feared would lead to radioactive contamination of the Commonwealth's groundwater and environment. Pet. App. 232a.

If petitioners' allegations are correct, Virginia's moratorium is preempted. The radiological safety of milling and tailings management is subject to exclusive federal oversight, except to the extent that regulatory authority is expressly delegated to States by agreement. Just as "[a] state moratorium on nuclear construction * * * falls squarely within the prohibited field" if it is "grounded in safety concerns" about the operation of NRC-licensed nuclear power plants, *Pacific Gas*, 461 U.S. at 213, a State's moratorium on uranium mining is preempted if that moratorium is grounded in safety concerns about the operation of NRC-licensed milling and tailings-management facilities.

By entering into a Section 2021 agreement with NRC, Virginia has acquired regulatory authority over "[s]ource materials," "[s]pecial nuclear materials," and specified categories of "[b]yproduct materials" within the Commonwealth. Pet. App. 300a; see *id.* at 298a-305a. That agreement, however, expressly excludes authority to regulate uranium mill tailings. See *id.* at 301a (excluding "[t]he regulation of byproduct material as defined in Section 11e.(2) of the [AEA]"); cf. 42 U.S.C. 2014(e)(2) (defining "byproduct material" to include tailings). Within Virginia, the "field of nuclear safety concerns" related to tailings management from the process of uranium milling therefore remains within the regulatory jurisdiction of the federal government. *English*, 496 U.S. at 82 (citation omitted). If the Commonwealth's uranium-mining ban was motivated by such concerns, it is preempted because it encroaches on that federally regulated field.

2. In holding that Virginia's moratorium was not preempted, the court of appeals construed Section 2021(k) to prohibit States from directly regulating, for purposes of protecting against radiological hazards, only "activities" that are regulated under the AEA. Pet. App. 11a. Emphasizing that the moratorium "does not mention uranium milling or tailings storage," *id.* at 14a, the court concluded that the ban is not preempted because the activity it directly regulates—conventional uranium mining—is not regulated under the AEA, *id.* at 11a. The court "decline[d]" to "look past the statute's plain meaning to decipher whether the legislature was motivated" by an impermissible radiological-safety consideration. *Id.* at 14a. The court understood the AEA to preempt state law only when "a state purports to regulate an activity that is also regulated by the [AEA]" *and* the State lacks a "'non-safety rationale' for the state rule." *Id.* at 9a (citation omitted). That approach was misconceived.

a. A State's purposeful effort to address the radiological hazards that it associates with AEA-regulated activities is preempted even if the State attempts to regulate those hazards indirectly, by prohibiting necessary antecedent activities that fall outside direct federal control. The court of appeals' contrary understanding is irreconcilable with *Pacific Gas*. As explained above (pp. 19-20, *supra*), California acknowledged in that case that it could not enact safety regulations for the construction or operation of power plants because NRC exercises authority over plant construction and operation. 461 U.S. at 212; see 42 U.S.C. 2021(c)(1). The State instead contended that it could exercise its authority over generation to ban new construction of power plants altogether "until [the State's] safety concerns are satisfied."

461 U.S. at 212; see 42 U.S.C. 2018. This Court rejected that argument, explaining that "[a] state moratorium on nuclear construction *grounded in safety concerns* [would] fall[] squarely within" the federally occupied nuclear-safety field, even if the State had purported to act within the scope of its traditional authority. 461 U.S. at 212-213 (emphasis added).

The court of appeals in this case described the California law at issue in *Pacific Gas* as involving an activity "clearly committed to the NRC's regulatory authority." Pet. App. 10a n.2 (citation omitted). As the foregoing discussion demonstrates, that is incorrect. *Pacific Gas* involved two California laws: Section 25524.1(b), which required case-by-case approval of a proposed nuclear power plant's capacity to store spent nuclear fuel rods, and Section 25524.2 (Cal. Pub. Res. Code §§ 25524.1(b), 25524.2 (West 1977)), which banned all new nuclear power plants until a permanent nuclear-waste disposal solution was developed. 461 U.S. at 197-198.

The court of appeals suggested that the Court in *Pacific Gas* had analyzed the first provision, which the court described as regulating an activity—power-plant construction—that was committed to NRC's regulatory authority. Pet. App. 9a-10a & n.2. That understanding appears to underlie the court's determination that purpose-based preemption analysis is appropriate only when "a state purports to regulate an activity that is also regulated by the [AEA]." *Id.* at 9a. In fact, however, the Court in *Pacific Gas* analyzed only the second provision (discussed above) because it determined that the first was not ripe for review. 461 U.S. at 203. After concluding that the second provision (barring construction of nuclear power plants) did *not* directly regulate a subject committed to NRC's regulatory authority, the

Court looked to the purpose of the law to determine whether it encroached on the federal field of nuclear safety. *Id.* at 212-213. Contrary to the court of appeals' belief, the Court in *Pacific Gas* thus did not limit purpose-based preemption analysis to direct state regulation of AEA-regulated activities. See *id.* at 213 (finding it "necessary to determine whether there [wa]s a nonsafety rationale" for California's ban on plant construction); *English*, 496 U.S. at 84 (reaffirming that "part of the pre-empted field is defined by reference to the purpose of the state law in question"); 42 U.S.C. 2021(k).

b. The court of appeals also cited other language in which the *Pacific Gas* Court had commented on the difficulty of ascertaining "legislative motive." Pet. App. 14a (quoting *Pacific Gas*, 461 U.S. at 216). The *Pacific Gas* Court made those observations, however, only after stating that it was "necessary to determine whether there [wa]s a nonsafety rationale for" the challenged California law, 461 U.S. at 213; that California had asserted an economic, non-safety-related rationale for that law, *ibid.*; and that the court of appeals in that case had found the law to be "directed towards purposes other than protection against radiation hazards," *id.* at 214 (citation omitted). Here, by contrast, the Fourth Circuit simply "decline[d] to examine why the Commonwealth chose to ban uranium mining," Pet. App. 15a, thus treating as irrelevant petitioners' allegation that Virginia's mining moratorium is intended to address radiological-safety hazards associated with milling and tailings-management activities. That was error. Given the relevance of legislative purpose to the AEA preemption inquiry, and petitioners' credible allegations that Virginia has banned uranium mining to address concerns about the radiological-safety aspects of milling and tailings management, petitioners'

complaint states a valid preemption claim and should not have been dismissed under Rule 12(b)(6).[7]

3. Under the approach taken by the court below, a State could effectively subvert federal regulatory judgments in the field of nuclear safety simply by choosing, as the immediate object of state regulation, an antecedent activity that is not itself subject to federal regulation under the AEA. That approach would provide an easy roadmap for evasion of Congress's judgments regarding the States' carefully defined and limited role in this sphere.

a. In *Skull Valley Band of Goshute Indians* v. *Nielson*, 376 F.3d 1223 (2004), cert. denied, 546 U.S. 1060 (2005) (*Skull Valley*), the Tenth Circuit considered a series of Utah laws motivated by concerns about the storage and transportation of spent nuclear fuel (SNF). Although some of the challenged laws facially regulated SNF, others did not. One provision converted to state control a county road that led to a proposed SNF storage site. *Id.* at 1251-1252. Another provision restricted counties' ability to provide "law enforcement, fire protection, waste and garbage collection" to SNF storage facilities. *Id.* at 1247. A third provision abolished limited liability for stockholders in companies operating SNF facilities. *Id.* at 1250-1251.

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[7] Because petitioners' complaint was disposed of at the motion-to-dismiss stage, and the Fourth Circuit took as true petitioners' allegation that Virginia's moratorium was grounded in radiological-safety concerns about uranium milling and tailings management, this Court need not address what evidence would be necessary or sufficient to prove those allegations on remand. Rather, the Court need only decide whether these allegations, if proved, would provide a sound basis for holding that the Virginia moratorium is preempted.

Although the AEA does not regulate state roads, municipal services, or shareholder-liability rules, the Tenth Circuit applied the preemption test set forth in *Pacific Gas* and concluded that "a state cannot use its authority to regulate" such matters "as a means of regulating radiological hazards" associated with NRC-licensed activities. *Skull Valley*, 376 F.3d at 1248. The court ultimately found each provision preempted, based on evidence that the State had enacted them to discourage the transportation and storage of spent nuclear fuel "for reasons of radiological safety." *Id.* at 1252; see *id.* at 1245-1248, 1250-1253. The Tenth Circuit thus correctly ensured that Utah could not effectively preclude, based on nuclear-safety concerns, AEA-regulated transportation and storage activities that the State lacked power to regulate directly.

In this case, the court below attempted to distinguish *Skull Valley* by noting that "all but two of the challenged Utah laws specifically mentioned this NRC-regulated activity [*i.e.*, storage of SNF]," and that the remaining two provisions "w[ere] packaged with two other transportation regulations targeting [SNF] directly." Pet. App. 16a. But if that distinction is treated as controlling, a State can effectively prevent federally regulated conduct that it views as causing nuclear-safety hazards, by proscribing necessary precursors to that conduct, so long as it is careful to forgo any express statutory reference to nuclear-safety concerns or federally regulated activities. The Fourth Circuit's approach would provide an easy means for States to subvert Congress's determinations regarding the appropriate allocation of power between federal and state governments.

b. This Court has recognized in other contexts that a State cannot escape preemption simply by regulating

a stage of the production process or stream of commerce that lies outside the area of direct federal regulation. In *National Meat Ass'n* v. *Harris*, 565 U.S. 452 (2012), the Court considered a California law that prohibited slaughterhouses from selling meat products of nonambulatory animals. *Id.* at 459. California argued that its law was not preempted by the Federal Meat Inspection Act, 21 U.S.C. 601 *et seq.*, which provides that States may not impose requirements on slaughterhouse operations that exceed or differ from federal requirements, 565 U.S. at 457, because the challenged state law focused not on slaughterhouse *operations* but rather on commercial *sales*, which are traditionally subject to state regulation. *Id.* at 463-464. The Court rejected that argument and found the state regulation preempted. The Court explained that, although the state law nominally regulated sales, its inevitable effect was to require slaughterhouses to structure their operations in a different way. *Id.* at 464.

Likewise in *Engine Manufacturers Ass'n* v. *South Coast Air Quality Management District*, 541 U.S. 246 (2004), the Court considered a set of local rules that barred public and private fleet operators from buying vehicles that did not comply with the city's emission requirements. *Id.* at 249. The Court found the local rules preempted by a federal law that prohibited any state or local "standard[s] relating to the control of emissions from new motor vehicles." *Id.* at 251. The Court explained that, although the local rules did not compel manufacturers of new motor vehicles to meet any new emissions limits, the manufacturer's federally protected right to sell vehicles would be "meaningless in the absence of a purchaser's right to buy them." *Id.* at 255; see *American Trucking Ass'ns* v. *City of Los Angeles*,

569 U.S. 641, 652 (2013) ("We have often rejected efforts by States to avoid preemption by shifting their regulatory focus from one company to another in the same supply chain."); *Rowe* v. *New Hampshire Motor Transp. Ass'n*, 552 U.S. 364, 371-373 (2008) (finding preemption even though the State's regulation "t[old] *shippers* what to choose rather than *carriers* what to do").

So too here, where Congress has excluded States from the management of nuclear-safety hazards, Virginia cannot escape preemption simply by precluding a necessary antecedent activity (uranium mining) instead of acting on the nuclear fuel cycle itself. If petitioners can show that Virginia has banned uranium mining in order to prevent radiation hazards posed by uranium milling and tailings management, then Virginia has encroached on a field reserved for the federal government and the state law is preempted.

II. IF VIRGINIA'S URANIUM-MINING BAN WAS MOTIVATED BY RADIOLOGICAL-SAFETY CONCERNS, IT IS BARRED BY CONFLICT-PREEMPTION PRINCIPLES BECAUSE IT IS INCONSISTENT WITH THE JUDGMENT OF FEDERAL AUTHORITIES THAT URANIUM MILLING AND TAILINGS MANAGEMENT CAN BE SAFELY CONDUCTED IF PERFORMED IN ACCORDANCE WITH FEDERAL REQUIREMENTS

A state law that bans uranium mining based on radiological-safety concerns about milling and tailings management also runs afoul of conflict-preemption principles. Under the AEA, one of Congress's primary objectives is to ensure that nuclear technology is safe enough for widespread development and use. *Pacific Gas*, 461 U.S. at 213. A state law that aims to protect against radiation hazards by preventing nuclear development—as Virginia's ban is alleged to have done

here—would "stand[] as an obstacle to the accomplishment and execution" of that objective. *English*, 496 U.S. at 79 (citation omitted).

A. This Court recognized in *Pacific Gas* that "[a] state prohibition on nuclear construction for safety reasons" would "be in the teeth of the [AEA]'s objective to insure that nuclear technology be safe enough for widespread development and use—and would be pre-empted for that [additional] reason." 461 U.S. at 213. Such a state prohibition would subvert the federal government's implementation of the AEA because "a state judgment that nuclear power is not safe enough to be further developed would conflict directly with the countervailing judgment of the NRC." *Ibid.*

In eliminating the federal monopoly over nuclear technology, Congress sought to encourage private parties to develop and use nuclear energy, consistent with public health and safety. 42 U.S.C. 2013(d). Here, Virginia has allegedly "interfere[d] with the objective of the federal regulation" by deciding for itself that milling and tailings management cannot be safely undertaken, *Pacific Gas*, 461 U.S. at 219, thus "unilaterally * * * prevent[ing] the involvement of the very private-sector forces that the [AEA] was designed to unleash." Pet. App. 47a-48a (emphasis omitted) (Traxler, J., dissenting). Congress committed those safety considerations to the federal government's oversight. If petitioners' allegations are true, Virginia's moratorium has "circumvented the AEA's requirements and frustrated its objectives" by intentionally "prevent[ing] the occurrence of" activities that Congress intended the federal government to regulate, for reasons committed to the federal government's jurisdiction. *Id.* at 21a, 52a.

To be sure, "Congress did not intend that nuclear power be developed 'at all costs,'" and it generally left States free to address concerns other than radiological safety. *Pacific Gas*, 461 U.S. at 200; see *id.* at 222-223. But Congress and executive branch agencies have made the judgment that milling and tailings management may be undertaken safely under federal regulations. *Id.* at 213. A moratorium intended to render such activities infeasible, based on a State's disagreement with that federal safety judgment, "stands as an obstacle" to the fulfillment of Congress's objectives. *English*, 496 U.S. at 79 (citation omitted).

B. A state law that bans uranium mining in order to prevent radiological hazards purportedly associated with downstream AEA-regulated activities also conflicts with Congress's chosen system for state participation in the regulatory field of nuclear-safety concerns. Under the AEA, any State that is concerned about radiological hazards from uranium milling and tailings management may seek NRC's authorization to regulate uranium mill tailings. See pp. 6-7, *supra*; 42 U.S.C. 2021. If granted that authority, a State may even impose radiological-safety standards that are "more stringent than" those adopted and enforced by NRC. 42 U.S.C. 2021(*o*)(2). NRC continues to regulate these activities in the national interest, however, and "[i]f the NRC determines that a State has a program that disrupts the orderly pattern of regulation among the collective regulatory efforts of the NRC and other Agreement States, i.e., creates conflicts, gaps, or duplication in regulation, the program would be found not compatible." 62 Fed. Reg. 46,517, 46,521 (Sept. 3, 1997).

Congress has separately permitted States to address certain low-level radiation hazards. 42 U.S.C. 2023(a).

Thus, States may directly regulate "on the basis of radiological hazard" the disposal or off-site incineration of low-level radioactive waste, "if the [NRC] * * * exempts such waste from regulation." *Ibid.*; see 42 U.S.C. 2021b(9)(A)(i) (excluding uranium mill tailings from the definition of "low-level radioactive waste"). States concerned about the safety of AEA-regulated activities may also participate in NRC licensing and rulemaking proceedings and may seek judicial review of NRC's determinations if they are aggrieved. See *Entergy Nuclear Vermont Yankee, LLC* v *Shumlin*, 733 F.3d 393 (2d Cir. 2013); *Skull Valley*, 376 F.3d at 1254. And even with respect to the construction and operation of nuclear power plants, where Congress has prohibited the federal government from delegating regulatory authority to a State, see 42 U.S.C. 2021(c), NRC must notify a State of any license application filed with NRC and must afford the State a reasonable opportunity to express its view concerning whether the application should be granted. 42 U.S.C. 2021(*l*).

Congress has thus established very specific mechanisms for state involvement in addressing radiological-safety hazards. Pursuant to one such statutory method, Virginia has entered into a Section 2021 agreement with NRC, but the Commonwealth declined to seek authority to regulate the radiological-safety aspects of uranium mill tailings. See pp. 9, 23, *supra*. Petitioners allege that the Commonwealth has attempted to address the same concerns through the alternative means of banning uranium mining. If that was in fact the Commonwealth's motivation, Virginia has impermissibly second-guessed the federal government's judgment that uranium milling and tailings management are safe enough

to proceed under federal standards. See *Gade* v. *National Solid Wastes Mgmt. Ass'n*, 505 U.S. 88, 98-101 (1992) (opinion of O'Connor, J.) (holding that federal law preempted an Illinois attempt to enforce training standards for hazardous-waste workers that were stricter than federal standards without using the mandated process of an approved state plan). That conflict with the judgment of federal regulatory authorities, and with Congress's chosen methods for state involvement in the sphere of nuclear safety, provides an additional ground for concluding that petitioners' complaint states a claim of federal preemption.

CONCLUSION

The judgment of the court of appeals should be reversed, and the case should be remanded for further proceedings.

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Supreme Court of the United States

VIRGINIA URANIUM, INC., et al.,

Petitioners,

v.

JOHN WARREN, et al.,

Respondents.

On Writ of Certiorari to the United States Court of Appeals for the Fourth Circuit

BRIEF FOR *AMICUS CURIAE* THE CHAMBER OF COMMERCE OF THE UNITED STATES OF AMERICA IN SUPPORT OF PETITIONERS

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STATEMENT OF INTEREST[1]

The Chamber of Commerce of the United States of America is the world's largest business federation. It represents 300,000 direct members and indirectly represents the interests of more than 3 million companies and professional organizations of every size, in every economic sector, and from every region of the country.

An important function of the Chamber is to represent the interests of its members in matters before the courts, Congress, and the Executive Branch. To that end, the Chamber regularly files *amicus curiae* briefs in cases that raise issues of concern to the Nation's business community. The Chamber has participated as *amicus curiae* in nearly every significant federal preemption case decided by this Court over the past decade. *See, e.g.*, *Kindred Nursing Ctrs. L.P. v. Clark*, 137 S. Ct. 1421 (2017); *Coventry Health Care of Mo., Inc. v. Nevils*, 137 S. Ct. 1190 (2017); *Puerto Rico v. Franklin Cal. Tax-Free Trust*, 136 S. Ct. 1938 (2016); *Gobeille v. Liberty Mut. Ins. Co.*, 136 S. Ct. 936 (2016); *Nw., Inc. v. Ginsberg*, 134 S. Ct. 1422 (2014); *Nat'l Meat Ass'n v. Harris*, 565 U.S. 452, 455 (2012); *AT&T Mobility LLC v. Concepcion*, 563 U.S. 333 (2011); *Williamson v. Mazda Motor of Am., Inc.*, 562 U.S. 323 (2011); *Bruesewitz v. Wyeth LLC*, 562 U.S. 223 (2011); *Wyeth v. Levine*, 555

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[1] No counsel for any party authored this brief in whole or in part, and no entity or person, aside from *amicus curiae*, its members, and its counsel, made any monetary contribution toward the preparation or submission of this brief. Counsel of record for all parties have consented to this filing in letters on file with the Clerk's office.

U.S. 555 (2009); *Altria Grp., Inc. v. Good*, 555 U.S. 70 (2008); *Riegel v. Medtronic, Inc.*, 552 U.S. 312 (2008).

The Chamber and its members have a strong interest in this case, as the decision below poses a threat both to the Nation's nuclear energy industry and to preemption doctrine as a whole.

SUMMARY OF ARGUMENT

The Atomic Energy Act assigns the federal government "broad regulatory authority over the development of nuclear energy." *Vt. Yankee Nuclear Power Corp. v. Nat. Res. Def. Council, Inc.*, 435 U.S. 519, 525-26 (1978). Indeed, this Court concluded more than 30 years ago that the federal government has "occupied the entire field of nuclear safety concerns," and that the Atomic Energy Act accordingly preempts any state law "grounded in safety concerns" arising from the production of nuclear energy. *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n* ("*PG&E*"), 461 U.S. 190, 212-13 (1983). In the decades since, the Court has reaffirmed that conclusion, reiterating that state laws "motivated by safety concerns" stemming from nuclear-related activities fall squarely within the field reserved to the federal government. *See English v. Gen. Elec. Co.*, 496 U.S. 72, 84 (1990); *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 249 (1984).

Congress' decision to reserve the safety-related regulation of nuclear power development to the federal government makes eminent sense, as that is a field that the federal government is uniquely well suited to regulate. Because nuclear technology began as an exclusively federal enterprise, the states do not have any traditional experience, let alone expertise,

with determining how to manage the safety risks that the development of nuclear energy may pose. Moreover, in large part because this is an area with which they may be unfamiliar, states have an unfortunate tendency to succumb to local "not in my backyard" complaints about the perceived (unfounded as they may be) safety risks of in-state nuclear power development. Such local impediments to the development of nuclear power pose a risk not just to the Nation's energy grid and the economy it supports, but to the national security and defense interests that domestic development of nuclear power advances. In short, the development of nuclear energy is a matter of both abiding federal expertise and abiding federal interest.

The decision below poses a grave threat to the safety-regulation role that Congress has reserved to the federal government. This Court has held time and again that the preemption inquiry in this context turns not just on *what* a state seeks to regulate, but *why*. That should have made this an easy case, as Virginia has banned mining of the Nation's single largest uranium deposit not for economic or other non-preempted reasons, but simply because Virginia determined that uranium production is not safe enough. Indeed, at least at this motion-to-dismiss stage, the state does not dispute that it banned uranium *mining* at the Coles Hill deposit as a prophylactic safety measure to prevent radiation exposure allegedly associated with uranium *milling and tailings management*—activities that everyone agrees may be regulated only by the federal government. But that is not a judgment for Virginia to make, as any state law "grounded in [radiological]

safety concerns falls squarely within the prohibited field" occupied by the federal government. *PG&E*, 461 U.S. at 213.

In concluding otherwise, the Fourth Circuit not only ran afoul of the Atomic Energy Act and this Court's decisions interpreting it, but created a roadmap for evading the preemptive force of federal law. According to the Fourth Circuit, even assuming Virginia's mining ban rests on precisely the kind of safety judgment forbidden to the states, it is not preempted because the ban does not say *on its face* that the state has prohibited uranium *mining* to prevent purportedly unsafe *milling and tailings management* from occurring at Coles Hill. In other words, according to the Fourth Circuit, a state may escape the preemptive force of federal law through the simple expedient of declining to make explicit in its laws its preempted motivations. The decision below thus creates a loophole not just in the Atomic Energy Act, but in all manner of federal statutes and regulations, as it effectively invites states to use labels and form to try to circumvent federal law.

That result cannot be reconciled with the long line of decisions from this Court reiterating that the "Supremacy Clause cannot be evaded by formalism." *Haywood v. Drown*, 556 U.S. 729, 742 (2009). Simply put, when a state admittedly regulates for the specific purpose of countermanding federal judgments in an exclusive federal field, its actions are preempted no matter what label or form it may use. By concluding otherwise, the decision below threatens to disrupt not just the Atomic Energy Act and the critical industry of

nuclear power generation, but preemption doctrine as a whole.

ARGUMENT

I. Congress Has Made The Eminently Sensible Judgment That The Federal Government Is Best Positioned To Regulate The Complex Field Of Nuclear Safety Concerns.

Nuclear energy is unusual among energy sources in that it began as an exclusively federal enterprise. At the dawn of the atomic age 75 years ago, the federal government maintained a "federal monopoly" on "the use, control, and ownership of all nuclear technology." *English*, 496 U.S. at 80. When Congress passed the Atomic Energy Act in 1954, it "relaxed" that federal monopoly, "determin[ing] that the national interest would be best served if the Government encouraged the private sector to become involved in the development of atomic energy for peaceful purposes under a program of federal regulation and licensing." *PG&E*, 461 U.S. at 194, 207. And with that relaxation came the introduction of a regulatory role for the states in "determining questions of need, reliability, cost and other related state concerns." *Id.* at 205. But while Congress left states free to "exercise their traditional authority" in these areas, *id.* at 212, Congress jealously guarded for the federal government "extensive control over the manner in which th[e] development [of nuclear energy] occur[s]," *Silkwood*, 464 U.S. at 249. In doing so, Congress reserved to the federal government exclusive authority to "regulate [nuclear] activities for purposes" of "protection against radiation hazards." 42 U.S.C. §2021(k).

That division of authority makes eminent sense. "Congress' decision to prohibit the states from regulating the safety aspects of nuclear development was premised on its belief that the [federal government] was more qualified to determine what type of safety standards should be enacted in this complex area." *Silkwood*, 464 U.S. at 250. And understandably so, as the federal government's historical monopoly over nuclear technology left states without the experience or expertise to regulate the process of developing nuclear power. To be sure, states may be better positioned to make non-safety-related judgments about which mix of power, and in what locations, best serves local economic and other interests. But states simply did not have—and in most instances still do not have—the extensive experience the federal government has acquired in "determin[ing] what type of safety standards" are most appropriate "in this complex area." *Id.*

That federal expertise, moreover, has only grown over time. The Nuclear Regulatory Commission ("NRC") has been acclaimed for its "high technical competence," which "cover[s] a wide range of technical areas." Int'l Atomic Energy Agency, *US Nuclear Regulatory Commission*, https://bit.ly/2u0ofDq (last visited July 24, 2018); *see also* U.S. Nuclear Regulatory Commission, *Backgrounder on National Security*, https://bit.ly/2mG6Lde (last visited July 24, 2018) ("NRC-regulated nuclear facilities are considered among the most secure of the nation's critical infrastructure."). And the federal government has developed considerable experience with nuclear technology through the military—experience that states simply are not in a position to develop. It is thus

little surprise that Congress reserved to the federal government "the entire field of nuclear safety concerns," *PG&E*, 461 U.S. at 212-13; this is an area that the federal government is simply better suited to regulate.

Of course, nuclear power is also an area in which the federal government has a uniquely strong interest, as nuclear energy is indispensable to our national security. That much is clear from the text of the Atomic Energy Act itself, which repeatedly emphasizes that one of its core purposes is to promote "the common defense and security." 42 U.S.C. §2013(c)-(e). In the decades since Congress passed the Atomic Energy Act, the importance of nuclear power to national security and defense has only grown. *See, e.g.*, Energy Futures Initiative, Inc., *The U.S. Nuclear Energy Enterprise: A Key National Security Enabler* 15 (Aug. 2017), https://bit.ly/2LoCEEP ("A vibrant domestic nuclear energy industry, including a healthy supply chain ..., is essential for the achievement of U.S. national security objectives."). To take just two examples, "[u]ranium is the predominant source of fuel for ... fissile material for nuclear warheads," Pet.App.4a, and "the U.S. Navy's nuclear-powered submarines and aircraft carriers are fueled with [highly enriched uranium] and rely upon its availability," Pet.App.348a.

Nuclear energy is also critical to the national economy. Reactors fueled by uranium are responsible for fully 20% of the electricity produced in this country, Pet.App.202a, and nuclear energy offers many benefits that confirm its value to a diversified energy economy. For example, nuclear power

"accounts for nearly two-thirds of the country's emissions-free power generation," and nuclear reactors "operate at about a 90% capacity factor, higher than any other fuel type." ***Expand Nuclear Energy Use and Commit to a Nuclear Waste Solution***, U.S. Chamber of Commerce Inst. for 21st Century Energy, http://bit.ly/1nyGP0I (last visited July 24, 2018). In no small part because of these benefits, the United States "has the greatest number of nuclear reactors in the world at present, and therefore the greatest demand for nuclear fuel." CA4 JA236.[2] Any disruption in the production of nuclear power thus poses a grave threat not just to individual states, but to the national economy.

Finally, this is also an area particularly well suited to federal regulation because states have an unfortunate tendency to yield to often very vocal "not in my backyard" constituencies when it comes to the development of nuclear energy within their borders. This is a case in point. Coles Hill is the single "largest natural deposit of uranium in the United States and one of the largest in the world," with an estimated 119 million pounds of uranium ore. Pet.App.201a. It is thus no exaggeration to say that whether the deposit may be mined will have a massive impact on the entirety of the Nation's nuclear power industry. And the impact is even more profound for Virginia and its residents, as estimates suggest that mining the Coles Hill deposit could "generate $4.8 billion of net revenue for Virginia businesses." Pet.App.202a. Yet the state is still unwilling to allow Coles Hill to be mined, out of

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[2] Citations to "CA4 JA" refer to the Joint Appendix filed in the Fourth Circuit.

professed concerns that the development of uranium can *never* be made safe enough for Virginians. That extraordinary hostility to the prospect of local nuclear energy development is powerful evidence of the wisdom of Congress' decision to give the federal government the power to "determine what type of safety standards should be enacted in this complex area." *Silkwood*, 464 U.S. at 250.

In short, the development of nuclear energy is a matter of both abiding federal expertise and abiding federal interest. It is thus imperative that courts guard just as jealously as Congress has the federal government's exclusive authority over "the entire field of nuclear safety concerns." *PG&E*, 461 U.S. at 212-13.

II. The Decision Below Is Impossible To Reconcile With This Court's Atomic Energy Act Cases.

The decision below poses a grave threat to the federal government's authority to regulate the development of nuclear power, as it guts the Atomic Energy Act of a core element of its preemptive force. The Atomic Energy Act is unusual in that "the pre-empted field" under the Act is defined, "in part, by ... the *motivation* behind the state law"—specifically, whether it is animated by concerns about radiological safety. *English*, 496 U.S. at 84 (emphasis added). That is clear on the face of the statute. Not only does the Act give the federal government the power to regulate nuclear power plants and the antecedent activities of uranium "milling" (*i.e.*, the extraction of uranium from ore) and "tailings management" (*i.e.*, the handling of radioactive waste

products generated by uranium milling). *See, e.g.*, 42 U.S.C. §§2111(a), 2014(e)(2), 2133; 10 C.F.R. pt. 40, app. A. The Act also expressly provides that states retain the power to regulate nuclear energy-related activities only "for purposes *other than protection against radiation hazards*." 42 U.S.C. §2021(k) (emphasis added). It is thus not only appropriate, but essential, for courts to identify the *purpose* of state regulation in this area, as that is the only way to determine if it is preempted.

This Court's decision in *PG&E* is illustrative. There was no dispute in that case about *what* the state was trying to regulate: It wanted to impose a moratorium on nuclear power plants. But to answer the question of whether that moratorium was preempted, this Court had to determine *why* the state imposed it, and "whether there [wa]s a non-safety rationale." *PG&E*, 461 U.S. at 213. If there was not, then the moratorium could not stand, as any state regulation "grounded in [radiological] safety concerns falls squarely within the prohibited field" occupied exclusively by the federal government. *Id.*; *accord* Brief for the United States as *Amicus Curiae* 13 ("a State's moratorium on uranium mining is preempted if that moratorium is grounded in safety concerns about the operation of NRC-licensed milling and tailings-management facilities"). Simply put, "a state judgment that nuclear power is not safe enough to be further developed would conflict directly with the countervailing judgment" of Congress. *PG&E*, 461 U.S. at 213.

That should have made this an easy case. Virginia does not contest (and cannot contest, at this

motion to dismiss stage) petitioners' allegations that the state "legislature banned uranium mining only as a means to prevent milling and tailings management from occurring in Virginia," out of professed concerns about the safety of those federally regulated activities. Pet.App.26a-27a. Virginia's ban thus "conflict[s] directly with the countervailing judgment" of Congress and the NRC that existing federal regulation suffices to address safety concerns about milling and tailings management. *PG&E*, 461 U.S. at 213. Yet the Fourth Circuit concluded that petitioners' preemption claim failed *as a matter of law*, "declin[ing] the invitation" to "look past the statute's plain meaning to decipher whether the legislature was motivated to pass the ban by" concerns about the safety of milling and tailings management. Pet.App.14a.

That reasoning is impossible to reconcile with this Court's decisions in *PG&E* and *English*. As those cases confirm, petitioners' request that the courts determine the purpose behind Virginia's ban is no mere "invitation." It is the inexorable command of the Atomic Energy Act and this Court's precedents interpreting it. *See, e.g.*, *PG&E*, 461 U.S. at 213; *English*, 496 U.S. at 84. Lower courts may no more "decline" the "invitation" to make that determination than they may "decline" the "invitation" to apply the Supremacy Clause. By refusing to answer the very question that this Court has deemed central to determining whether state regulation in this area is preempted, the decision below deprives the Atomic Energy Act of its core preemptive force.

III. The Decision Below Provides A Roadmap For State And Local Governments To Evade The Preemptive Force Of Federal Law.

The Fourth Circuit's decision not only guts the Atomic Energy Act of much of its preemptive force, but also provides a roadmap to states seeking to evade the preemptive force of all manner of federal statutes. As this Court has admonished time and again, it is the substance of a state law, not its form, that controls the preemption inquiry. *See, e.g.*, *Aetna Health Inc. v. Davila*, 542 U.S. 200, 214-15 (2004); *Howlett v. Rose*, 496 U.S. 356, 382-83 (1990); *Allis-Chalmers Corp. v. Lueck*, 471 U.S. 202, 211 (1985). States thus cannot evade the Supremacy Clause through the simple expedient of labeling their laws something other than what they are. To be sure, in many preemption cases, the substantive inquiry turns on the *effect* of a state law, not its purpose. But when Congress chooses, as it did in the Atomic Energy Act, to define "the pre-empted field, in part, by ... the motivation behind the state law," *English*, 496 U.S. at 84, then courts must look beyond labels and form to determine the purpose behind the challenged law. Otherwise, states could avoid preemption merely by declining to make their true motivations explicit—as Virginia has now succeeded in doing here.

Indeed, even accepting the Fourth Circuit's mistaken conclusion that it matters only *what* Virginia sought to regulate, not *why*, the decision below still cannot be reconciled with the principle that preemption turns on substance, not form. Here, the state does not dispute that the "legislature banned uranium mining *only as a means to prevent milling*

and tailings management from occurring in Virginia," Pet.App.26a-27a (emphasis added)—two activities that no one disputes may be regulated only by the federal government, *see* Pet.App.12a-13a. In other words, the state does not dispute that it sought to ban mining only as a means to regulate (or, more aptly, prohibit) the very activities that everyone agrees it may not regulate. Yet the Fourth Circuit nonetheless concluded that the state's ban was not preempted, simply because the "the plain language of the ... ban *does not mention* uranium milling or tailings storage." Pet.App.14a (emphasis added). Thus, under the Fourth Circuit's view, a state is free to countermand federal regulation to its heart's content, so long as it is smart enough not to "mention" preempted fields on the face of its law.

That reasoning finds no support in any of this Court's preemption jurisprudence. Take this Court's cases involving the Federal Arbitration Act ("FAA"). Just this past Term, this Court reiterated that states may not "target arbitration *either by name or by more subtle methods*, such as by 'interfer[ing] with fundamental attributes of arbitration.'" *Epic Sys. Corp. v. Lewis*, 138 S. Ct. 1612, 1622 (2018) (emphasis added). Just as the FAA "preempts any state rule discriminating *on its face* against arbitration," so, too, the FAA "displaces any rule that *covertly* accomplishes the same objective by disfavoring contracts that (oh so coincidentally) have the defining features of arbitration agreements." *Kindred Nursing Ctrs. Ltd. P'ship v. Clark*, 137 S. Ct. 1421, 1426 (2017) (emphasis added). Thus, if a state adopts a "rule classifying as unconscionable arbitration agreements that fail to abide by the Federal Rules of Evidence, or that

disallow an ultimate disposition by a jury (perhaps termed 'a panel of twelve lay arbitrators' to help avoid preemption)," the rule is preempted all the same, regardless of whether it happens to "mention" arbitration. *AT&T Mobility LLC v. Concepcion*, 563 U.S. 333, 342 (2011).

This Court's cases interpreting the Natural Gas Act ("NGA")—an area of law implicating similar interests as this case—reflect the same principle. Under the NGA, the regulation of wholesale natural-gas prices lies with the federal government, while the regulation of retail natural-gas prices remains with the states. *Oneok, Inc. v. Learjet, Inc.*, 135 S. Ct. 1591, 1594 (2015). But that does not mean that the analysis begins and ends with determining *what* a state seeks to regulate. While state laws that "direct[ly] regulat[e] the prices of [interstate] wholesales of natural gas" are preempted, the same is true of "state regulations which would indirectly achieve the same result," "whether or not framed to achieve ends ... ordinarily within the ambit of state power." *N. Nat. Gas Co. v. State Corp. Comm'n of Kan.*, 372 U.S. 84, 90-91 (1963); *see also, e.g., Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293, 308 (1988) ("the things Act 144 regulation is *directed at*, the control of rates and facilities of natural gas companies, are precisely the things over which FERC has comprehensive authority" (emphasis added)).

This Court's decision in *National Meat Association v. Harris*, 565 U.S. 452 (2012), is also illustrative. There, the Court addressed whether the Federal Meat Inspection Act ("FMIA")—which preempts state statutes addressing the front-end

processes of inspecting, handling, and slaughtering livestock—preempted a state statute that prohibited slaughterhouses, at the back-end, from *selling* meat that satisfied all federal requirements. *Id.* at 455, 463-64. Although "the FMIA's preemption clause does not usually foreclose 'state regulation of the commercial sales activities of slaughterhouses,'" *id.* at 463, the Court nonetheless held the state law preempted, for any other conclusion would allow "any State [to] impose any regulation on slaughterhouses just by framing it as a ban on the sale of meat produced in whatever way the State disapproved." *Id.* at 463-64. That, the Court explained, "would make a mockery of the FMIA's preemption provision." *Id.* at 464.

The same logic carried the day in *Engine Manufacturers Association v. South Coast Air Quality Management District,* 541 U.S. 246 (2004). There, the Court considered whether the Clean Air Act, which prohibits states from adopting or enforcing "standard[s] relating to the control of emissions," preempted local regulations requiring fleet operators to buy only those vehicles satisfying state pollution standards that far exceeded federal requirements. *Id.* at 249, 251. Addressing the argument that the rules escaped preemption because they targeted the *purchase* of vehicles, and did not directly regulate the *manufacturing* process, the Court concluded that such a distinction "would make no sense" "for pre-emption purposes." *Id.* at 255. As the Court explained, "[t]he manufacturer's right to sell federally approved vehicles is meaningless in the absence of a purchaser's right to buy them." *Id.*

Haywood v. Drown likewise "confirms that the Supremacy Clause cannot be evaded by formalism." 556 U.S. at 742. There, the Court considered whether a state—"[m]otivated by the belief that damages suits filed by prisoners against state correction officers were by and large frivolous and vexatious"—could shield those officers from lawsuits under §1983 by stripping state courts of jurisdiction to hear them. 556 U.S. at 731, 733. Although the Court acknowledged that, as a formal matter, a state has inherent "authority to organize its courts," the Court concluded that "a State's invocation of 'jurisdiction'" could not be a "trump that ends the Supremacy Clause inquiry." *Id.* at 740-41. As the Court explained, Congress made a judgment through §1983 that "*all* persons who violate federal rights while acting under color of state law shall be held liable for damages," *id.* at 737, and a state cannot countermand that judgment through "an immunity statute cloaked in jurisdictional garb," *id.* at 742.

Of course, these are but a handful of the cases in which this Court has made clear that states cannot evade the preemptive force of federal law through the simple expedient of including or omitting magic words in their legislation. Yet that is precisely the result that the Fourth Circuit's decision below countenances. So long as a state "does not mention" on the face of its law its intent to target an area reserved by Congress to the federal government, the preemption inquiry is at an end. Indeed, the Fourth Circuit allowed Virginia's ban to escape preemption even though the state *admits* (at least at this stage) that the ban rests on a judgment that milling and tailings management pose too great of radiological safety concerns—a

judgment that "conflict[s] directly with the countervailing judgment" of Congress and the NRC. *PG&E*, 461 U.S. at 213.

This Court should therefore reverse the decision below, restore the full preemptive force of the Atomic Energy Act, and reaffirm that "[t]he force of the Supremacy Clause is not so weak that it can be evaded by mere mention of [one] word" instead of another. *Howlett*, 496 U.S. at 382-83. Any other disposition not only will provide a roadmap for states to impede Congress' efforts to encourage domestic uranium mining, but will embolden them to employ the same clever labeling and workarounds in all manner of other federally regulated areas. Neither outcome has anything to recommend it.

CONCLUSION

For the foregoing reasons, this Court should reverse the judgment below.

Respectfully submitted,

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IN THE

Supreme Court of the United States

VIRGINIA URANIUM, INC., *et al.*,
Petitioners,

v.

JOHN WARREN, *et al.*,
Respondents.

On Writ of Certiorari to the United States Court of Appeals for the Fourth Circuit

BRIEF OF SENATOR TOM COTTON, SENATOR JIM INHOFE, AND SENTATOR TED CRUZ AS *AMICI CURIAE* IN SUPPORT OF PETITIONERS

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INTEREST OF *AMICI*[1]

Amici curiae are three currently serving United States Senators, with distinct interests in the national security and federalism issues presented by this case. Specifically, *amici* have an interest in the proper interpretation of the Atomic Energy Act's preemptive scope, to ensure that local interests do not circumvent federal priorities on issues of national concern. Domestically produced uranium is one such issue. Not only is a domestic supply of uranium critical to the United States' security and defense strategy, it also affects the Nation's status as an independent and forward-looking leader on the global stage. *Amici* are responsible for developing federal legislation related to nuclear policy, making them uniquely situated to address the strategic importance of uranium. *Amici* further have a vested interest in ensuring that federal law on this issue is both respected and effectuated.

Senator Tom Cotton, an army veteran, represents the State of Arkansas and serves on the Senate Committee on Armed Services and the Senate Select Committee on Intelligence. His assignments afford him a distinct perspective on the need for nuclear material as it relates to military defense and readiness in today's geopolitical climate. He is keenly aware of the risks in failing to meet that need.

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[1] No counsel for a party authored this brief in whole or in part, and no party or counsel for a party made a monetary contribution intended to fund the preparation or submission of this brief. No one other than *amici curiae*, its members, or its counsel made a monetary contribution to the preparation or submission of this brief. *Amici* certify that all parties have consented to the filing of this brief.

Senator Jim Inhofe represents the State of Oklahoma and serves on the Senate Committee on Armed Services. He also chairs the Subcommittee on Readiness and Management Support, where he is responsible for overseeing policy relating to military readiness and construction, defense energy and environmental programs, and conventional ammunition procurement. Senator Inhofe has a particular interest in the role nuclear energy plays in defense readiness.

Senator Ted Cruz represents the State of Texas and serves on the Senate Committee on Armed Services. As part of his work on that Committee, Senator Cruz is responsible for advancing policy related to the Department of Defense, military research and development, and nuclear energy. Senator Cruz has long been an advocate for a strong and cohesive national defense, which in turn requires a well-articulated nuclear regulatory framework.

As part of their service on the Committee on Armed Services, *amici* are also members of the Subcommittee on Strategic Forces, which steers federal policy on nuclear and strategic forces, nuclear defense, defense environmental management programs, and arms control and non-proliferation programs. The Subcommittee also has oversight over several agencies devoted to nuclear safety and defense. Accordingly, *amici* are intimately familiar with the issues that drove Congress to allocate responsibility for nuclear safety between the federal government and the states, and *amici* continue to work on matters committed to the federal government by the Atomic Energy Act.

In light of their deep experience, *amici* agree that national interests require the Atomic Energy Act's jurisdictional balance between the federal government and the states be respected. Because the decision below upsets that balance and jeopardizes na-

tional interests, *amici* agree with Petitioners that the Court should reverse the Fourth Circuit.

SUMMARY OF ARGUMENT

The Fourth Circuit's determination that the Commonwealth of Virginia's ban on uranium mining is not preempted by the Atomic Energy Act (the "Act") *solely* because the ban's literal text addresses an activity not covered by the Act provides states a clear path to nullify federal policy in favor of local preferences through creative backchannels and artful wording. Tying the Act's preemptive scope to the strict language of a statute disregards Congress's prior decision to vest regulation of radiological hazards with the federal government and undermines federal policy concerning assets, like uranium, that are critical to our Nation's security and defense.

The Act and its amendments memorialize Congress's cumulative attempt to grapple with the military, political, social, and economic consequences of harnessed nuclear power and to allocate oversight responsibility for those consequences in a workable regulatory framework. The Act's legislative history demonstrates the careful consideration with which Congress allocated federal and state responsibilities for regulating nuclear safety. In early amendments to the Act, Congress committed oversight responsibility of radiological hazards to the federal government. However, Congress also created an agreement-based scheme whereby the civilian-led Nuclear Regulatory Commission ("the Commission")[2] can transfer certain

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[2] The Energy Reorganization Act of 1974, 42 U.S.C. § 5801 *et seq.*, abolished the Atomic Energy Commission and transferred its regulatory functions to the Nuclear Regulatory Commission. References to "the Commission" shall refer to both agencies.

of its regulatory functions to the states. Absent transfer of authority pursuant to a valid agreement, the *federal* government retains exclusive authority to regulate activities covered by the Act for purposes of radiological safety. That is, federal law preempts state law.

Pursuant to this Court's precedents, which require consideration of the purpose and effect of a state statute vis-à-vis radiological safety, Virginia's ban is preempted by the Act. The ban purports to regulate an activity that is properly within Virginia's jurisdiction: uranium mining on nonfederal lands. In purpose and effect, however, the ban actually targets post-mining activities (uranium *milling* and *tailings* storage and disposal) because of those activities' perceived radiological hazards. However, such post-mining activities are not accounted for in Virginia's current agreement with the Commission, making regulation of those activities for purposes of radiological safety the exclusive province of the federal government.

The Act's legislative history demonstrates the careful consideration with which Congress allocated federal and state responsibilities for regulating nuclear safety. In willfully blinding itself to the purpose of Virginia's ban, the Fourth Circuit upended the Act's deliberate jurisdictional balance without any consideration for the national and international consequences that flow from the military, political, and economic interests that drove Congress to assign regulatory responsibility in the manner it did. The Fourth Circuit also disregarded the Court's prior teachings and refused to consider the plethora of evidence disclosing the motivation behind the ban: perceived radiological hazards associated with uranium milling and tailings management.

Restricting the Act's preemptive scope would permit states to do indirectly what they cannot do directly, carrying far-reaching and serious risks. In this case, local-based preferences threaten the implementation of uniform federal policy over uranium, a strategic national resource, at a critical time. Domestic production and development of uranium is at historic lows, exacerbated in no small part by Virginia's ill-conceived blockade of the largest known uranium deposit in the United States. But an unduly formalistic approach that eschews any analysis of purpose or policy would extend well beyond this case, affecting a host of nuclear-related activities covered by the Act, and no less critical to our common national interests. Accordingly, *amici* urge the Court to reverse the Fourth Circuit and reaffirm that the Act's preemptive scope encompasses both the purpose and effect of any state regulation.

ARGUMENT

I. RESTRICTING THE ACT'S PREEMPTIVE SCOPE TO ACTIVITIES REGULATED BY THE ACT WITHOUT REGARD TO PURPOSE OR EFFECT WOULD UNDERMINE IMPLEMENTATION OF UNIFORM FEDERAL POLICY OVER ISSUES OF NATIONAL IMPORTANCE.

A. The Act's Preemption Framework Reflects Congress's Careful Determination Of Federal And State Competencies Balanced Against Federal And State Interests.

The development of nuclear energy and technology in the United States has been uniquely federal in nature. Indeed, the Manhattan Project—the genesis of the United States' nuclear program—was sponsored

by the federal government. *See* Arthur W. Murphy & D. Bruce La Pierre, *Nuclear "Moratorium" Legislation in the States and the Supremacy Clause: A Case of Express Preemption*, 76 COLUM. L. REV. 392, 394–95 (1976). While the atomic bomb dramatically demonstrated the military and political implications of atomic energy, the role atomic energy would come to play in civilian life was less clear. Congress struggled to develop a legislative framework capable of handling atomic energy's unique policy issues. *See, e.g.*, Byron S. Miller, *A Law is Passed — The Atomic Energy Act of 1946*, 15 U. CHI. L. REV. 799 (1948).

Reflecting Congress's then-judgment that the federal government was the only body prepared to address these policy issues, the inaugural 1946 version of the Act committed nuclear energy exclusively to federal authority by way of the Commission. Murphy & La Pierre, *supra*, at 395. The 1946 Act further declared a national policy—"subject at all times to the paramount objective of assuring the common defense and security"—to direct efforts toward "improving the public welfare, increasing the standard of living, strengthening free competition in private enterprise, and promoting world peace." Atomic Energy Act of 1946, ch. 724, § 1, 60 Stat. 755, 756.

Within a decade, however, Congress "concluded that the national interest would be best served if the Government encouraged the private sector to become involved in the development of atomic energy for peaceful purposes under a program of federal regulation and licensing." *Duke Power Co. v. Carolina Envtl. Study Grp., Inc.*, 438 U.S. 59, 63 (1978). Accordingly, Congress passed the Atomic Energy Act of 1954, which allowed private entities to own and operate nuclear facilities that produced and utilized special nuclear materials, including uranium. *See*

H. Hamilton Hackney III, Comment, *Recent Congressional Proposals for Providing Relief to the Domestic Uranium Industry: Saving Grace or Just Another Expensive Bailout?*, 10 J. ENERGY L. & POL'Y 171, 175 (1990).

The 1954 Act encouraged private development "by opening the door to private construction, ownership, and operation of commercial nuclear-power reactors under the strict supervision of the [Commission]." *English v. Gen. Elec. Co.*, 496 U.S. 72, 81 (1990). However, both the 1946 and 1954 versions of the Act stipulated that the federal government remained "the sole owner of uranium products." *Atlas Corp. v. United States*, 895 F.2d 745, 748 (Fed. Cir. 1990). The Commission, therefore, maintained "pervasive control" over all aspects of uranium procurement, production, sales, and disposal. *Id.*

Termination of the federal monopoly on the development of nuclear energy exposed states to a variety of potential health and environmental hazards that they had previously been precluded from regulating. *Federal-State Relationships in the Atomic Energy Field: Hearings Before the J. Comm. on Atomic Energy*, 86th Cong. 25 (1959) ("*Hearings*"). Consequently, federal and state agencies endeavored to cooperate in regulating those hazards, with the federal government providing extensive assistance in the form of information-sharing, training, funding, and model regulations and standards. *Id.* at 25–26.

Nonetheless, there became evident a "need for clarification of the responsibilities of the Federal and State Governments for regulating atomic energy." *Id.* at 26; *see also, id.* at 393. As the nuclear power and mining industries grew, states pressured the federal government for the right to regulate those activities occurring within their borders. Ronald H. Rosenberg,

Uranium Mining and Milling in Virginia: An Analysis of Regulatory Choice, 4 VA. J. NAT. RESOURCES L. 81, 96 (1984). Federal, state, and industry officials agreed on the need for clarification, but the precise allocation of authority was hotly debated, in part because then-existing state efforts and competencies were far from uniform. *See Hearings* at 127–31, 394.

Two competing considerations drove the uncertainty as to which government was properly responsible for regulating nuclear hazards. On the one hand, providing for the welfare and public health of its citizens had traditionally fallen within the states' core police powers. *Id.* at 20, 274, 289. Conversely, the legal enforceability of any state regulation of atomic energy was questionable: "the 1954 act set[ ] forth a directive to the Federal agency to adopt a comprehensive scheme of regulations," and courts frequently treated such direction as preempting any corresponding state regulation. *Id.* at 126. Moreover, "under the act, the objectives of Federal regulations are to assure protection of the public while not unduly burdening industrial progress, and thus more restrictive requirements by the State might be deemed as interference with national nuclear development policy." *Id.*

An early bill drafted by the Commission "provided for the exercise of dual or concurrent jurisdiction by both the [Commission] and the States over activities licensed by the Commission." *Id.* at 27. To minimize "inconsistency," the proposed bill excluded licensing responsibilities already exercised by the Commission and provided that state requirements "may not be 'in conflict with' those adopted by the Commission." *Id.* at 290. However, the notion of concurrent jurisdiction elicited concerns over duplication of efforts, industry burden from conflicting and overlapping re-

quirements, and whether the federal or a state government would prevail in the event of conflicting standards or decisions, particularly as it came to overregulation. *Id.* at 20, 120, 129, 131. In light of these concerns, shared federal and state jurisdiction over radiological safety was rejected. *Id.* at 290.

Instead, Congress

> provide[d] a statutory framework within which the States may assume an independent regulatory role in extensive areas now occupied by the Atomic Energy Commission on a basis which will assure appropriate protection for public health and safety and compatibility between the regulatory programs of the States and those of the Commission.

Id. at 290. Specifically, the 1959 amendments established a program through which the Commission could transfer to states limited portions of its regulatory authority to license and regulate nuclear byproduct materials, source materials (including uranium), and certain quantities of special nuclear materials. Qualified states, known as "Agreement States," were authorized to enter into an agreement executed by the Governor of the state and the Chairman of the Commission under which the state could *partially* assume the Commission's regulatory duties. 42 U.S.C. § 2021(b).

There are several steps to becoming an Agreement State. The Governor of the applicant state must certify that the state is willing to "assume regulatory responsibility" for nuclear material, including uranium. 42 U.S.C. § 2021(d)(1). The Governor must also certify that the state possesses a "program for the control of radiation hazards adequate to protect the public health and safety." *Id.* In turn, the Commission

must make several independent findings, including that the state's program is compatible with and at least as restrictive as the Commission's own rules and regulations. *Id.* § 2021(d)(2); *see also* S. Rep. No. 86-870, at 11 (1959). The Commission further reserves the right to take back all or part of these regulatory functions from a state upon notice and hearing, or peremptorily in emergency circumstances. 42 U.S.C. § 2021(j).

Certain regulatory responsibilities, because of their nature, were not eligible for transfer to an Agreement State. The federal government retains exclusive jurisdiction over "areas in which the technical safety considerations are of such complexity that it is not likely that any State would be prepared to deal with them during the foreseeable future," as well as those "areas as to which interstate, national, or international considerations seem to be paramount." *Hearings* at 291. Also excepted from the program were activities associated with high levels of radioactive hazards, such as managing nuclear reactors. *Id.* As reported by the Joint Committee on Atomic Energy: "These are areas which, because of their special hazards, or for reasons of Federal responsibility, are believed desirable for continued responsibility by the Commission." S. Rep. No. 86-870, at 10.

With regard to those responsibilities that may be devolved to the states, the Act provides that once an agreement is established, "[d]uring the duration of such an agreement . . . the State shall have authority to regulate the materials *covered by the agreement* for the protection of the public health and safety from radiation hazards." 42 U.S.C. § 2021(b) (emphasis added). Otherwise, state and local authorities may only "regulate activities for purposes *other than* protection against radiation hazards." *Id.* § 2021(k). In

other words, "State laws and regulations concerning the control of radiation hazards from byproduct, source, and special nuclear materials shall not be applicable except pursuant to an agreement entered into with the Commission."[3] *Hearings* at 488; *see also* S. Rep. No. 86-870, at 12 ("As indicated elsewhere, the Commission has exclusive authority to regulate for protection against radiation hazards until such time as the State enters into an agreement with the Commission to assume such responsibility."); *id.* at 3 ("[I]n order for a State to so regulate or license [materials covered by the Act], it must first establish an adequate program for this purpose and enter into an agreement with the Commission.").

The Act's legislative history demonstrates the careful consideration with which Congress allocated federal and state responsibilities for regulating nuclear safety. In so doing, Congress considered both the competencies of the states as well as the national or international implications that may flow from an activity regulated by the Act. Truly local concerns were left to the province of the states, while issues of na-

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[3] This language originally appeared in one of the near-final proposed bills, but was subsequently removed "as unnecessary," because "[w]ith or without this sentence, in order for a State to so regulate or license [materials under the Act] it must first establish an adequate program for this purpose and enter into an agreement with the Commission." S. Rep. No. 86-870, at 3. The removal was "*not* intend[ed] to change the substantive effect of the bill" and was "*not* intend[ed] to leave any room for the exercise of concurrent jurisdiction by the States to control radiation hazards." *Hearings* at 500 (emphases added). Rather, it meant to provide courts with "greater latitude in sustaining certain types [of laws, (*e.g.*, zoning requirements)] which have *purposes other than control of radiation hazards*, even though such requirements might have an *incidental* effect upon the use" of material licensed by the Commission. *Id.* (emphases added).

tional or international significance, including highly technical and highly hazardous activities, were committed exclusively to the Commission's control.

For those regulatory aspects that could potentially be transferred to the states, the federal government assumed responsibility for supervising that transition. As part of that responsibility, the Commission must ensure that the state has in place a regulatory scheme that both adequately protects against radiological harms *and* meets federal expectations for achieving the purposes of the Act—namely, the private development and use of nuclear energy for peacetime purposes, subject, of course, to the national interest in common defense and security. *See* 42 U.S.C. § 2011; S. Rep. No. 83-1699, at 3, 4 (1954). At bottom, the responsibility for setting policy over radiological hazards rests with the federal government.

B. Formalistic Limits To The Act's Preemptive Scope Upset The Federal/State Jurisdictional Balance And Permit State And Local Governments To Override The Federal Government On Issues Of National Importance.

In preempting a field of regulation, Congress has determined an area is of such significance or national import that it must be governed by a single, national policy for which state or local authorities may not substitute their own judgments.

Here, "the federal government has occupied the entire field of nuclear safety concerns, except the limited powers expressly ceded to the States." *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 212 (1983). In line with traditional tenets of preemption that look to "whether 'the

matter on which the State asserts the right to act is in any way regulated by the Federal Act,'" *id.* at 213 (quoting *Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218, 236 (1947)), "the Court defined the pre-empted field, in part, by reference to the *motivation* behind the state law," *English*, 496 U.S. at 84 (emphasis added). The remaining "part of the field is defined by the state law's actual effect on nuclear safety." *Id.* In other words, "state regulation of matters directly affecting" aspects of radiological safety committed exclusively to the federal government also impermissibly intrude upon the preempted field. *Id.* Taken together, this Court has made clear that the preemptive scope of the Act is not limited to the "plain language" of the challenged statute.

And for good reason. Federal preemption could be rendered meaningless if state or local authorities could circumvent federal policy through artful wording or other creative backchannels. *Cf. Entergy Nuclear Vt. Yankee, LLC v. Shumlin*, 733 F.3d 393, 416 (2d Cir. 2013) (explaining that courts do not "blindly accept the articulated purpose . . . for preemption purposes," because that would permit states to "nullify nearly all unwanted federal legislation" (quoting *Greater N.Y. Metro. Food Council, Inc. v. Giuliani*, 195 F.3d 100, 108 (2d Cir. 1999))). The danger is particularly acute here given the public penchant to stigmatize nuclear development out of fear associated with the radiological hazards of nuclear material. *See, e.g.*, M.V. Ramana, *Nuclear power and the public*, 67 Bull. of the Atomic Scientists, July 1, 2011, at 43-51. Any approach to preemption that turns a blind eye to motive and effect would give state and local authorities carte blanche to override federal policy concerning nuclear material and radiological hazards, so long as the pertinent language does not pur-

port to regulate activities under the Commission's exclusive jurisdiction.

In fact, some states have previously attempted to do just that, but were prevented by courts that looked beyond the text of the statute to understand the motivating purpose behind the statute. *See Entergy Nuclear*, 733 F.3d 393; *Skull Valley Band of Goshute Indians v. Nielson*, 376 F.3d 1223 (10th Cir. 2004). In *Entergy*, the Second Circuit held as preempted a Vermont statute that required state legislative approval to build a nuclear power plant. 733 F.3d at 403, 428. While the statute purported to regulate the generation, sale, and transmission of electric power, the Second Circuit observed that Vermont's legislative history "expressed concern about radiological safety" associated with nuclear power plants and further "expressed a desire to evade federal preemption." *Id.* at 420. In holding the statute preempted, the court explicitly noted that the preemption inquiry "does not end at the text of the statute." *Id.* at 416. Similarly, in *Skull Valley*, the Tenth Circuit went beyond the plain language of a Utah statute that facially regulated state highways and right-of-way restrictions when transporting spent nuclear fuels to determine that those laws were enacted for the purpose of regulating radiological safety and, thus, were preempted. 376 F.3d at 1251–53.

Virginia's moratorium on uranium mining is cut from the same cloth as the statutes at issue in *Entergy* and *Skull Valley*. While it purports to regulate activities within the Commonwealth's purview, local concern regarding the radiological hazards associated with *post*-mining activities—activities that fall within the Commission's jurisdiction—has sustained the ban

since its inception.[4] Moreover, the mining ban effectively operates as a ban on those same post-mining activities allowing Virginia to regulate indirectly what it may not regulate directly.

Critically, while Virginia is a partial Agreement State under the Act, the 2009 agreement expressly carves out uranium mill tailings from the Commonwealth's regulatory authority. *See* William Brice Fiske, *Virginia's Moratorium: Is Uranium Mining on the Horizon in the Commonwealth?*, 37 WM. & MARY ENVTL. L. & POL'Y REV. 289, 307–08 (2012). Nor does Virginia possess the statutorily required regulatory structure to assume responsibility for uranium millings due to its moratorium over conventional mining. *See id.* (citing William Robert G. Burnley, *How Will Virginia Regulate Uranium Mining?*, 60 VA. LAW., 41, 43 (2011)).[5] The power to regulate the radiological

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[4] *See, e.g.*, Pet. App. 239a–297a; Associated Press, *Proposed East Coast Uranium Mine Dividing Va.*, USA Today (Jan. 26, 2013), https://www.usatoday.com /story /news/nation/2013/01/26/virginia-uranimum-mine/1866489/; Jonathon Wilson, *Rural Community Debates Pros and Cons of Uranium Mining*, WAMU (Mar. 29, 2013), http://wamu.org/story/13/03/29/rural_community_debates_pros_and_cons_of_uranium_mining/; Ana Komnenic, *Amid Fierce Political Opposition, US Uranium Miner Suspends Mine Plans*, Mining.com (Dec. 15, 2013), http://www.mining.com/amid-fierce-political-opposition-us-uranium-miner-gives-up-on-one-of-the-worlds-largest-uranium-deposits-66417; KTAR Newsroom, *Drive to Mine Uranium in Va. Comes to Quiet Pause*, KTAR News (Dec. 14, 2013), http://ktar.com/story/112903/drive-to-mine-uranium-in-va-comes-to-quiet-pause/.

[5] Should a state assume responsibility for tailings management, the state is required to comply with federal standards governing the safety of that material. *See* Uranium Mill Tailings Radiation Control Act of 1978, Pub. L. No. 95-604, § 204(e), 92 Stat. 3021 (providing for federal regulation of radiological hazards associated with uranium tailings left over from the mill-

hazards associated with uranium milling and tailing activities therefore remains *exclusively* with the Commission. 42 U.S.C. § 2021(b), (k). Congress and the Commission have already determined that the post-mining processing and subsequent waste storage of uranium is sufficiently safe to license. The Commonwealth may not substitute its own judgment regarding the safety of post-mining activities by effectively blocking such activities within its borders. Reducing the preemptive inquiry to a text-based analysis would effectively rubberstamp state legislation challenged under the Act.

C. Domestic Production Of Uranium Is A National Strategic Interest.

As Judge Traxler observed in his dissent below, "[t]he stakes in this case are significant." Pet. App. 21a. *Amici*, as sitting Senators and members of the Senate Committee on Armed Services—including the subcommittee charged with overseeing nuclear defense policy—are aptly suited to speak to those stakes.

Most importantly, the availability and development of uranium, and particularly, the *domestic production* of uranium, is integral to the Nation's security. International treaty obligations prohibit the use of imported foreign enriched uranium, or uranium enriched on U.S. soil using foreign technology, for defense purposes. George David Banks & Michael Wallace, Ctr. for Strategic & Int'l Studies, *Recapturing U.S. Leadership in Uranium Enrichment* 5 (Nov. 2013). Any uranium used for defense purposes must be "produced by and procured from domestic sources

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ing process); 10 C.F.R. § 150.31 (requiring state compliance with any standards promulgated by the Commission or the Environmental Protection Agency pursuant to UMTRCA).

using U.S. enrichment technology." *Id.* However, there remains just one active enrichment plant in the United States, which is European-owned and utilizes foreign enrichment technology.[6] World Nuclear Ass'n, *US Nuclear Fuel Cycle*, http://www.world-nuclear.org/information-library/country-profiles/countries-t-z/usa-nuclear-fuel-cycle.aspx (last updated July 2018); *see also* Banks & Wallace, *supra*, at 3. Thus, the United States is not presently able to generate any enriched uranium for defense purposes.

In addition, domestic production of uranium has plummeted since the Cold War due to market pressures from heavily subsidized European enriched uranium and the importation of low-enriched uranium from Russia under the Megatons to Megawatts Program.[7] Banks & Wallace, *supra*, at 2. In 2017, domestic production of uranium concentrate, which came from just seven facilities in three states, fell 16% year-over-year and was the lowest annual pro-

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[6] A demonstration plant, American Centrifuge, was intended to develop new U.S. technology for enrichment but the Department of Energy cut all funding for the plant in September 2015, and the plant demobilized shortly thereafter. *See* World Nuclear News, *American Centrifuge Demonstration Plan Completes Operations* (Feb. 22, 2016), http://www.world-nuclear-news.org/C-American-Centrifuge-demonstration-plant-completes-operations-2202167.html.

[7] The Megatons to Megawatts Program was a commercially financed government program in which weapons-grade uranium from dismantled Russian nuclear warheads was recycled into low-enriched uranium for use in U.S. nuclear power plants. *See* Centrus, *Megatons to Megawatts*, http://www.centrusenergy.com/who-we-are/history/megatons-to-megawatts/ (last visited July 23, 2018). During the Megatons to Megawatts Program, which lasted from 1994 through 2013, almost half of the uranium used in U.S. nuclear power plants came from Russia. World Nuclear Ass'n, *US Nuclear Fuel Cycle*, *supra*.

duction level since 2004. U.S. Energy Info. Admin., *Domestic Uranium Production Report – Annual*, Nuclear & Uranium (May 22, 2018), https://www.eia.gov/uranium/production/annual/. In 2018, domestic uranium production is expected to drop even further, to approximately 0.7 million pounds, the lowest production since 1949 and less than 2% of the uranium required to power U.S. reactors. *See* Uranium Energy Corp., *Uranium Energy Corp 2018 Letter to Shareholders* (Jan. 29, 2018), http://www.uraniumenergy.com/news/releases/index.php?content_id=645. Even though the Coles Hill uranium deposit provides a significant, legally viable source of uranium—indeed, it is the largest such deposit in the United States—Virginia's blanket ban precludes any development that might aid in the Nation's defense.

While some experts suggest that the United States has sufficient high-enriched uranium and depleted material to meet its defense needs in the near future, they acknowledge that stockpiles of low-enriched uranium, used to produce the quick-decaying tritium that is essential for several military applications, are far more limited. Banks & Wallace, *supra*, at 8-9. Although high-enriched uranium can be downblended to produce low-enriched uranium, because the United States "no longer has any capacity to produce [high-enriched uranium] to replace consumed material," the availability of high-enriched uranium for this purpose is unknown, and most high-enriched stocks "are reserved primarily for defense program strategic reserves and for production of fuel for the U.S. Navy." *Id.* at 9. Significant dependence on foreign uranium creates a serious national security concern.

Moreover, the demand for high-enriched uranium is likely to increase, further depleting critical domestic uranium stores. The Navy is increasing its oceanic

surveillance as "a very critical element of [U.S.] national security and [the U.S.'s] ability to influence and ensure that . . . vital interests are protected throughout the world." *See* CBS News, *Inside the U.S. Navy's Newest Fastest Submarines* (May 10, 2017), http://www.cbsnews.com/news/us-navy-newest-submarine-squad-virginia-class/. In January 2017, the Pentagon approved a $128 billion executive program to build a brand new fleet of 12 nuclear submarines, Anthony Capaccio, *Fleet of 12 Nuclear Submarines in Line for Pentagon Approval*, Bloomberg (Jan. 4, 2017), https://www.bloomberg.com/news/articles/2017-01-05/new-nuclear-armed-subs-win-pentagon-approval-before-obama-leaves, which garners significant support from *amici* and other members of the Committee on Armed Services. However, expansion of the Navy's nuclear fleet faces "major obstacles," including the limited ability of nuclear fuel producers to ramp up the supply of fuel. *See Trump's Navy Warship Expansion Plan Faces Major Obstacles*, Newsweek (Mar. 20, 2017), http://www.newsweek.com/donald-trump-navy-warships-navy-expansion-571281.

The limited availability of homegrown enriched uranium also damages the Nation's ability to implement its nuclear nonproliferation agenda. The United States has a "significant stake" in preventing the proliferation of foreign enrichment facilities, because those facilities can easily be converted to produce weapons-grade uranium. Banks & Wallace, *supra*, at 10. To reduce foreign powers' need to develop their own enrichment technology, the United States has previously sold certain countries uranium, already enriched, with the condition that it be used solely for peaceful purposes. *Id.* In so doing, the United States has "use[d] market power to strengthen its non-

proliferation efforts" by "back[ing] up its policy objectives with a means to achieve them." *Id.* at 10–11. But as domestic production and export of uranium decline, the United States risks losing market leverage and becoming increasingly dependent on foreign powers such as France and Russia to "lead in negotiations with countries seeking to develop enrichment capabilities." *Id.* "Reversing this trend is crucial to preserving U.S. influence in shaping global nonproliferation policy." *Id.*

Aside from military and defense concerns, there are also significant economic and geopolitical interests at stake. Domestic mining comprises just a small fraction of the fuel used in domestic reactors, and the Nation's "nuclear fuel production capacity [is] insufficient for domestic needs." World Nuclear Ass'n, *US Nuclear Fuel Cycle*, *supra*. Indeed, 93% of the uranium purchased by domestic utilities is imported, 32% of which comes from Russia, Kazakhstan, and Uzbekistan. U.S. Energy Info. Admin., *Uranium Marketing Annual Report* (May 31, 2018), https://www.eia.gov/uranium/marketing/.

Because the United States is the world's largest consumer of nuclear energy, The Statistics Portal, *Leading countries in nuclear energy consumption in 2017 (in million metric tons of oil equivalent)*, https://www.statista.com/statistics/265539/nuclear-energy-consumption-in-leading-countries/ (last visited July 20, 2018), the gap between what domestic uranium producers can deliver and what consumers require represents an unrealized domestic economic benefit that is instead exported to countries such as Russia, Kazakhstan, and Uzbekistan.

Industry experts further predict "a significant expansion of global nuclear power," with China, India, and Russia making up nearly 40% of the world's fleet

of nuclear reactors by 2030. Banks & Wallace, *supra*, at 11; *see also* U.S. Energy Info. Admin., *China Expected to Account for More than Half of World Growth in Nuclear Power Through 2040*, TODAY IN ENERGY (Sept. 28, 2016), https://www.eia.gov/todayinenergy/detail.php?id=28132. The expansion of the global nuclear market will likely result in higher fuel costs as domestic owners and operators compete with new foreign entrants. Banks & Wallace, *supra*, at 11.

Notably, in the last five years, five nuclear power plants have shut down for economic reasons. *See* Sonal Patel, *More Premature Nuclear Unit Retirements Loom*, POWER Magazine (Feb. 1, 2018), http://www.powermag.com/more-premature-nuclear-unit-retirements-loom/?pagenum=1. Several other plants have announced early retirement plans in the immediate future, and long before the plants' scheduled license expiration. U.S. Energy Info. Admin., *Fort Calhoun Becomes Fifth U.S. Nuclear Plant to Retire in Past Five Years*, TODAY IN ENERGY (Oct. 31, 2016), https://www.eia.gov/todayinenergy/detail.php?id=28572.

The shuttering of domestic nuclear facilities will force utility companies either to replace lost capacity with alternative sources, such as domestic fossil fuels, or to import electricity from other countries, frustrating national efforts to both reduce foreign energy dependence and to encourage private investment and development of nuclear energy. *Id.*; *see also*, U.S. Energy Info. Admin., *U.S. Nuclear Capacity and Generation Expected to Decline as Existing Generators Retire*, TODAY IN ENERGY (May 12, 2017), https://www.eia.gov/todayinenergy/detail.php?id=31192; *accord* World Nuclear Ass'n, *Nuclear Power in the USA*, http://www.world-nuclear.org/information-library/country-profiles/countries-t-z/usa-nuclear-power.aspx

(last updated June 2018) ("Given that nuclear plants generate nearly 20% of the nation's electricity overall and 63% of its carbon-free electricity, even a modest increase in electricity demand would require significant new nuclear capacity by 2025.").

The dangers of foreign dependency on uranium underscore the need for easier access to domestic uranium in a time of increased global tension. Not only does the near complete reliance on uranium imports deny an economic opportunity for domestic producers, it erodes the United States' ability to ramp up nuclear production or to leverage its uranium supply as a bargaining chip for nonproliferation negotiations. *Amici* support the prudent development of U.S. natural resources to secure U.S. interests and insulate the Nation from undue external influence. Similarly, Congress has expressed a desire to encourage uranium mining while "avoid[ing] dependence on imports." *See* 42 U.S.C. §§ 2296b-3(a), -6(a)–(b).

The White House has also affirmed that domestic access to and prudent development of nuclear materials is a vital component of the Nation's security and also necessary to promote affordable, reliable, and clean energy consumption. *See, e.g.*, Exec. Order No. 13,783, 82 Fed. Reg. 16,093, 16,093–97 (Mar. 28, 2017). Domestic production of energy sources is a key component of this platform. To that end, the President directed agency heads to undertake an immediate review of all existing agency actions that "potentially burden the development or use of domestically produced energy resources, with particular attention to . . . nuclear energy resources." *Id.* at 16,093. A guidance memorandum subsequently issued by the Office of Information and Regulatory Affairs explained that agency actions covered by the executive order included those that: (1) "[a]ffect the design

and/or location of domestic energy production"; (2) "[a]ffect the design and/or location of drilling or mining of energy production resources; and (3) "[l]imit the use of certain sources of energy, such that the development of domestically produced energy resources from a certain sector may be negatively affected." Dominic J. Mancini, Office of Info. & Regulatory Affairs, Exec. Office of the President, M-17-24, *Guidance for Section 2 of Executive Order 13783, Titled "Promoting Energy Independence and Economic Growth"* 2–3 (2017), https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/memoranda/2017/M-17-24.pdf.

In response to Executive Order 13,783, the U.S. Department of Agriculture recommended revising a prior public land order that withdrew certain lands in the Grand Canyon watershed from federal mining laws, noting revision could potentially open the area up to exploration for and mining of uranium. U.S. Dep't of Agric., *Final Report Pursuant to Executive Order 13783 on Promoting Energy Independence and Economic Growth* 9 (Oct. 11, 2017), https://www.fs.fed.us/sites/default/files/eo-13783-usda-final-report-10.11.17.pdf; U.S. Dep't of Agric., *EO 13783 USDA Final Report; Recommendations Sorted by Priority* (Oct. 11, 2017), https://www.fs.fed.us/managing-land/energy.

Declining productivity of domestic nuclear power poses significant strategic risks that threaten national security. Recognizing the need for an effective and uniform policy regarding nuclear development, the Act affirmatively removes certain regulatory decisions from the states and commits them exclusively to the judgment of the Commission to allow the *federal* government to mitigate and remediate many of these risks. A needlessly formalistic approach to

preemption that focuses on the literal text of the statute permits states to second-guess sound federal judgment and undermine national policy through backdoor legislation. Reaffirming the Court's prior holdings that the Act's preemptive scope is informed both by purpose and effect, and not limited by the text of the state statute, would ensure federal policy appropriately carries the day in these strategically critical areas.

D. Uranium Is A Critical And Strategic Mineral Warranting Of Federal Oversight.

The importance of federal control over uranium mineral supplies for national military, economic, and energy purposes was the motivating factor for Congress to first implement federal oversight over uranium development. *See* Anthony J. Thompson & Christopher S. Pugsley, Rocky Mountain Mineral Law Found., 2006 No. 2 RMMLF-Inst. Paper No. 3, *United States Federal / State Licensing / Permitting Regimes Implicated By Uranium Development* (2006). Both the 1946 and 1954 versions of the Act granted the Commission broad and general powers to search for and mine uranium, which was considered to be "in the national interest." *See* Robert S. Palmer, Rocky Mountain Mineral Law Inst., 2 RMMLF-Inst. 4, *Problems Arising Out of Public Land Withdrawals of the Atomic Energy Commission* (1956).

The Defense Production Act of 1950 ("DPA") further provided financial assistance to private enterprise for exploration, development, and mining of critical and strategic metals and minerals, including uranium. *See* Defense Production Act of 1950 (DPA), ch. 932, 64 Stat. 798 (codified as amended at 50 U.S.C. § 4501) (formerly at 50 U.S.C. app. § 2061). The Secretary of the Interior was permitted to withdraw public lands

from purchase or occupation to carry out uranium exploration. Palmer, *supra*, at 1. Once the federal government had surveyed geographic areas for viable uranium deposits, the Commission would award special government contracts to private entities to perform the actual drilling operations. *Id.*

At the time, the federal government was the only legal owner of uranium material. *Atlas*, 895 F.2d at 748. To encourage private enterprise participation in the program, the Commission guaranteed a market for those uranium producers and committed to purchase all of the producers' output. *Id.* at 747, 755. The program was "successful beyond the [g]overnment's highest expectations," causing the Commission to announce significant cutbacks in 1956 to mitigate unforeseen burdens associated with the unlimited purchase commitment. *See* Jon. J. Indall, Rocky Mountain Mineral Law Found., 2006 No. 2 RMMLF-Inst. Paper No. 16, *A Historical Review of the Relationship Between The Federal Government and the Domestic Uranium Industry and Current Uranium Activities and Issues in New Mexico* (2006).

Through the DPA, Congress also conferred upon the Executive Branch an "array of authorities to shape national defense preparedness programs and to take appropriate steps to maintain and enhance the domestic industrial base" to ensure domestic capability to provide essential material, like uranium, in furtherance of national defense. 50 U.S.C. app. § 4502(a)(4) (formerly at 50 U.S.C. app. § 2062(a)(4)). The DPA extends the executive's power to domestic preparedness, response, and recovery against natural disasters, terrorist attacks, and other national emer-

gencies.[8] Jared T. Brown & Daniel H. Else, Cong. Research Serv., R43767, *The Defense Production Act of 1950: History, Authorities, and Considerations for Congress* (2014).

Exclusive federal ownership over uranium ended in 1964, with the passage of the Private Ownership of Special Nuclear Materials Act ("1964 Ownership Act"). The 1964 Ownership Act permitted private ownership of uranium as well as the sale of uranium to private entities. *See* Private Ownership of Special Nuclear Materials Act, Pub. L. No. 88-489, 78 Stat. 602 (1964) (codified as amended in scattered sections of 42 U.S.C.). In releasing the federal government's monopsony on uranium, Congress recognized the value of private enterprise in assuring a ready and robust uranium supply for both the United States military in addition to other security needs. *See* S. Rep. No. 88-1325, at 17 (1964) ("*1964 Report*") ("It is the committee's view that the measures taken in this bill to assure the viability of the domestic uranium industry are in the *national* interest since this industry is closely related to our vital *defense* and *security* interests.") (emphases added).

The 1964 Ownership Act further encouraged the private development and investment of domestic uranium by requiring the Commission to deny uranium enrichment services for foreign-source uranium "to the extent necessary to assure the maintenance of a viable domestic uranium industry." 42 U.S.C. § 2201(v)(B)(iii) (1988). At this time, the Commission was the only entity capable of enriching natural uranium for use in nuclear reactors and it issued sup-

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[8] The President has delegated these powers to department and agency heads. *See* Exec. Order No. 13,603, 77 Fed. Reg. 16,651 (Mar. 16, 2012).

plemental guidance stating that it would not enrich any foreign-source uranium for domestic use. *See* 31 Fed. Reg. 16,479 (Dec. 19, 1966). However, the Commission amended its position in 1974 and the restrictions on foreign-source uranium were gradually phased out. *See* 39 Fed. Reg. 38,016 (Oct. 21, 1974). In 1983, Congress reaffirmed the Commission's responsibility for monitoring and assessing the viability of the domestic uranium industry. *See* Hackney, *supra*, at 181 (citing 42 U.S.C. § 2011 (1982)).

To this day, the federal government continues to show a special interest in the domestic production and procurement of uranium. Recognizing that "the United States is heavily reliant on imports of certain mineral commodities that are vital to the Nation's security and economic prosperity," the White House issued Executive Order 13,817, titled "A Federal Strategy To Ensure Secure and Reliable Supplies of Critical Minerals." Exec. Order No. 13,817, 82 Fed. Reg. 60,835, 60,835 (Dec. 20, 2017). Concerned that the "dependency . . . on foreign sources creates a strategic vulnerability for both [the United States'] economy and military to adverse foreign government action, natural disaster, and other events that can disrupt supply of these key minerals," the Executive Order encouraged "[a]n increase in private-sector domestic exploration, production, recycling, and reprocessing of critical minerals." *Id.*

Pursuant to this Executive Order, the Department of the Interior classified uranium as one such "critical mineral" that is "essential to the economic and national security of the United States." Exec. Order No. 13,817, 82 Fed. Reg. 60,835, 60,835 (Dec. 20, 2017); *see also* U.S. Dep't of the Interior, Final List of Critical Minerals 2018, 83 Fed. Reg. 23,295 (May 18, 2018). Three crucial features qualify uranium as a

"critical mineral": (1) it is "essential to the economic and national security of the United States"; (2) "the supply chain . . . is vulnerable to disruption"; and (3) it "serves as an essential function in the manufacturing of a product, the absence of which would have significant consequences for our economy or our national security." Exec. Order No. 13,817, 82 Fed. Reg. 60,835, 60,835 (Dec. 20, 2017). The purpose of the "critical minerals" list is to facilitate the creation of a national, multi-agency effort to reduce foreign reliance on uranium and promote access to domestic supply of uranium in both the immediate short term and going forward. USGS, *Interior Releases 2018's Final List of 35 Minerals Deemed Critical to U.S. National Security and the Economy* (May 18, 2018), https://www.usgs.gov/news/interior-releases-2018-s-final-list-35-minerals-deemed-critical-us-national-security-and.

As recognized by this Court, the federal government has long exercised monopsony-like power to influence uranium production in the name of national interest. *See, e.g., Huffman v. W. Nuclear, Inc.*, 486 U.S. 663 (1988).

* * *

Uranium will "never be wrestled completely free from military and political exigencies." James R. Wilch, Comment, *GATT and the Half-Life of Uranium Industry Protection*, 10 N.W. J. INT'L L. & BUS. 150, 192 (1989). As Congress has previously observed:

> [T]he Government's inventories of source and special nuclear materials represent a precious national asset. Unlike other materials which are perishable . . . the uranium inventory represents a vast nonperishable asset with intrinsic value in

> units of usable energy. Wisely managed, it can contribute to the common defense and security and to the welfare of the Nation."

1964 Report at 3122. In preempting the field of nuclear safety, Congress determined that the federal government was best positioned to balance the need for domestic production and development of nuclear material against the radiological hazards attendant to those activities. Uranium's importance to numerous national strategic interests underscores courts' responsibility to zealously guard federal policy from state obstruction.

Here, Virginia has enacted a blanket prohibition on uranium mining due to concerns about the radiological hazards of post-mining activities—activities committed exclusively to the Commission's regulatory authority. To prevent state subversion of a critical national policy, the Court should reaffirm that the Act's preemptive scope turns on the purpose and effect of a state's statute, even when, as here, the text of the statute purports to regulate activities appropriately within the state's jurisdiction.

CONCLUSION

For the foregoing reasons, the Court should reverse the Fourth Circuit's decision.

Respectfully submitted,

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IN THE

Supreme Court of the United States

VIRGINIA URANIUM, INC., ET AL.,

Petitioners,

v.

WARREN, ET AL.,

Respondents.

On Writ of Certiorari to the United States Court of Appeals for the Fourth Circuit

BRIEF OF ENTERGY OPERATIONS, INC. AND ENTERGY NUCLEAR OPERATIONS, INC. AS *AMICI CURIAE* IN SUPPORT OF PETITIONERS

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INTEREST OF AMICI CURIAE[1]

Entergy Nuclear Operations, Inc. and Entergy Operations, Inc. (together, "Entergy") hold licenses issued by the U.S. Nuclear Regulatory Commission ("NRC") to operate nuclear power plants in seven States: Arkansas, Louisiana, Massachusetts, Michigan, Mississippi, New York, and Vermont. These plants collectively employ approximately 6,000 professionals, and those that remain in operation generate nearly 9,000 megawatts of power annually. As an NRC license-holder, Entergy must comply with expansive NRC regulations governing every aspect of nuclear power generation—from construction to decommissioning.

Entergy has been subjected to state regulation of these plants motivated by a radiological safety purpose and hence federally preempted under the majority approach in the lower courts. Such regulation has put Entergy (and other similarly situated licensees) in the difficult position of either challenging the regulations as preempted or complying with the state regulation (often at great cost). Because Entergy operates nuclear facilities in multiple States, it has a particular interest in ensuring that nuclear facilities are not impermissibly saddled with radiological safety-motivated state

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[1] Pursuant to Rule 37.3, the parties have consented to the filing of this brief. Letters of consent have been filed with the Clerk. No counsel for any party authored this brief in whole or in part, and no counsel or party made a monetary contribution intended to fund the preparation or submission of this brief. No person other than *amici curiae* made a monetary contribution to its preparation or submission.

regulations in light of the already comprehensive NRC scheme.

INTRODUCTION AND SUMMARY OF THE ARGUMENT

The question before the Court is whether the Atomic Energy Act ("AEA") preempts a State from regulating in its otherwise permissible sphere when the State does so for the purpose of regulating radiological health and safety. Virginia is not alone in burdening nuclear power generation by using facially legitimate state authority as a pretext for regulating radiological safety. As described below, numerous States have taken actions imposing costly and unnecessary radiological safety-based regulation on every phase of the nuclear generation cycle, including construction, operation, storage of spent nuclear fuel ("SNF"), and decommissioning. And the lower courts have properly looked behind the face of those efforts to their true purpose and readily found them preempted.

For example, States previously have attempted to impose the following facially neutral regulations, where the evidence showed that the State's true purpose was to regulate radiological safety: (1) requiring legislative approval for a nuclear power plant that had operated for decades to continue operating pursuant to its NRC license; (2) imposing a $5 million fee for consideration of an application to build an SNF storage facility; (3) requiring a $15 million payment for the ability to construct and move SNF to a dry cask storage facility; and (4) enacting a prohibition punishable as a misdemeanor on any person role-playing a county official for purposes of emergency planning. In all of these examples, the

regulations on their face fell within the traditional realm of state authority. And yet, in each of these examples, clear evidence showed that the State's motivating purpose was a concern about radiological safety, resulting in their preemption.

Even when this type of regulation does not result in complete elimination of the nuclear activity within the borders of the State, as it does in the instant case, nuclear plant owners and operators can be subject to what the Federal Circuit has referred to as "blackmail" as a condition of performing activities properly subject to the jurisdiction of the NRC. NRC licensees must consider whether to challenge such improper regulation in costly litigation or comply with the regulation as a business expense. In this manner, a State's ability to impose costs through improper legislation or regulation is one tool that local politicians use to stunt and even eliminate America's nuclear power production in clear violation of federal law and policy. For this reason, the AEA preemption framework should, as the majority of lower courts have held, require an inquiry into the purpose behind state and local laws and regulatory actions. This does not leave States remediless; they are free to bring their nuclear safety concerns to the NRC's attention, and they are barred only from engaging in direct regulation based on their concerns.

Amici do not repeat Petitioners' arguments on the scope of AEA preemption. Rather, they describe several past examples where States have acted from a radiological-safety purpose and discuss the practical costs that those regulations imposed before they were successfully challenged.

ARGUMENT

I. THE LOWER COURTS HAVE PROPERLY HELD PREEMPTED ATTEMPTS OF CERTAIN STATES TO INTERFERE WITH FEDERAL AUTHORITY OVER NUCLEAR SAFETY UNDER THE GUISE OF PERMISSIBLE STATE REGULATION

Nuclear power provides low-cost energy with little to no greenhouse gas emissions. It is an important source of domestic energy, enabling Americans to reduce reliance on fossil fuels, and an important tool in maintaining the reliability of the United States power grid. In the United States, the NRC regulates radiological health and safety through all phases of nuclear power generation, pursuant to the AEA. As this Court has held, "the federal government has occupied the entire field of nuclear safety concerns, except the limited powers expressly ceded to the states." *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n* ("*PG&E*"), 461 U.S. 190, 212 (1983). This Court has "defined the pre-empted field, in part, by reference to the motivation behind the state law." *English v. Gen. Elec. Co.*, 496 U.S. 72, 84 (1990).

Despite the clear language of the AEA, Congress' clear expression of its intent to occupy the field of nuclear safety, and this Court's holdings, some States have sought to regulate nuclear facilities based on radiological safety concerns throughout the lifecycle of nuclear power generation in a manner inconsistent with federal law and policy. Contrary to the result reached below by the Fourth Circuit, it is entirely appropriate—and indeed, necessary—for courts to inquire into the purpose behind state actions affecting

nuclear power generation in order to determine whether they are preempted. Time and again, the lower courts have properly determined that state action, although facially permissible, was undertaken for an impermissible radiological safety purpose and hence invaded the field exclusively regulated by the NRC.

A. The Lower Courts Have Invalidated State Laws Whose Facial Neutrality Was Found Pretextual For A Purpose To Regulate For Radiological Safety

1. Vermont

In *Entergy Nuclear Vermont Yankee, LLC v. Shumlin*, 838 F. Supp. 2d 183 (D. Vt. 2012), *aff'd in relevant part*, 733 F.3d 393 (2d Cir. 2013), both the district court and the Second Circuit held invalid as preempted a Vermont law found to be aimed at regulating radiological safety. The Vermont Yankee Nuclear Power Plant ("Vermont Yankee") had operated for more than 30 years when, in advance of applying to the NRC for a license renewal for a new term of operation, the Vermont legislature passed a law requiring State approval for continued operation. In 2002, Entergy Nuclear Vermont Yankee, LLC ("ENVY"), had purchased the plant, making clear at the time that it would seek to increase the generation capacity of the plant, construct a dry cask storage facility,[2] and seek the NRC's approval to operate the

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[2] The fuel rods used to power the reactor are stored in deep pools of treated water after they have been used. These rods can be moved into sealed metal cylinders on a concrete pad, known

plant beyond the March 2012 date in its original NRC operating license. *Entergy Nuclear*, 838 F. Supp. 2d at 191.

After approving the sale of Vermont Yankee to ENVY from the prior state-utility owners, the Vermont State government sought to thwart continued operation of the plant. First, although a state law banning SNF storage had a carve-out for the owners of the nuclear plant, the attorney general interpreted that provision not to apply to ENVY but only to the prior owners. *Entergy Nuclear*, 838 F. Supp. 2d at 194. Next, the Vermont legislature passed two bills, known as Act 74 and Act 160, that effectively gave the Vermont legislature a pocket veto over continued operation of the plant, requiring the legislature to pass a bill affirmatively allowing continued operation. *Id.* at 189. Then, to assist in implementation of Acts 74 and 160, the legislature passed Act 189, which required what it termed a "reliability" assessment of the plant but which in fact called for state investigation into crucial radiological safety systems at the plant. *Id.* at 212-13. At each turn, Vermont legislators sought, in the remarkably candid words of one committee member, to "find another word for safety," *id.* at 203, 229, such that the State could regulate radiological safety under the guise of permissible state activity. ENVY and Entergy Nuclear Operations, Inc. ("ENOI," the NRC-licensed operator for the plant) sued, the district court enjoined the relevant state laws as preempted, and

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as dry casks, for long-term storage. *Entergy Nuclear*, 733 F.3d at 400 n.7.

the Second Circuit affirmed. *Entergy Nuclear*, 733 F.3d at 398.

As to SNF storage, the legislative history made clear that legislators opposed, on radiological safety grounds, any sort of enactment that would permit construction of a dry cask storage facility. *Entergy Nuclear*, 838 F. Supp. 2d at 195. Indeed, the district court detailed how "more than a dozen witnesses testif[ied] regarding their safety concerns surrounding spent fuel storage." *Id.* Legislators raised these safety concerns even though an expert witness hired by the legislative counsel had advised them that "a lot of the concerns that citizens have are concerns that you can't address *directly* the way they want them to be addressed." *Id.* (emphasis added). One legislator, for example, suggested that a concern about the safety of a dry cask storage facility could be rooted in the need for "some money" because, "if the federal government or Entergy doesn't protect it, we're going to have to do it because we are not going to let our citizens . . . blow up." Another asked whether there might be a "creative use of statute," whereby "someone might have a safety issue in mind," but instead invoke the aesthetic interest in shielding "the visible impact of these casks from the river." *Id.* Indeed, the district court noted that "[o]ther references to safety by legislators and witnesses are too numerous to recount." *Id.*

Ultimately, the legislature passed Act 74, which compelled ENVY to seek approval from the state public utility commission to construct the dry cask storage facility and, as a condition of its passage, required ENVY to agree to deposit more than $15 million into a Clean Energy Development Fund. *Id.*

at 200. The bill incorporated a memorandum of understanding ENVY and ENOI had entered into with the State that imposed numerous conditions governing radiological health and safety. *Entergy Nuclear*, 733 F.3d at 402.[3] Yet the legislative enactment still required ENVY to obtain legislative approval for storage of SNF generated after the original license term. *Entergy Nuclear*, 838 F. Supp. 2d at 197.

The battle over SNF storage promptly led to one over the continued operation of the Vermont Yankee plant itself. *Id.* at 202. Again, legislators evinced a belief that the NRC would not protect sufficiently the safety of Vermont residents and sought to act based upon nuclear safety concerns. *Id.* at 202-07. Comments on the bill requiring state approval of continued plant operation linked safety to reliability and economics—a plant shut down for nuclear safety reasons could not provide power or economic benefit to the State. *Id.*

These themes echoed throughout the legislature's consideration of the bill, and legislators again sought

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[3] The conditions included that the SNF storage pad be located "at least one hundred feet from a floodplain, space the storage casks to permit access to individual casks 'to the greatest extent possible,' configure the spent-fuel pool so that high-decay heat assemblies are surrounded by low-decay heat assemblies, perform temperature monitoring and monthly manual radiation surveillance of the storage casks and report the results to the [Vermont state agency], not store waste generated outside Vermont on site, remove 'high level' spent nuclear fuel from Vermont 'as quickly as possible,' and conduct a study addressing the stability of the proposed new spent nuclear fuel storage facility based upon a stated concern that an adjacent river bank might erode and collapse." *Entergy Nuclear*, 733 F.3d at 402.

to clothe their safety concerns in non-safety terms by "find[ing] another word for safety." *Id.* at 203. As the bill progressed, legislators cautioned one another to speak in terms of economic benefit or reliability—because "we don't say safety when we're talking Vermont Yankee in this room." *Id.* at 206. As enacted, Act 160 required legislative approval for operation of the Vermont Yankee plant after March 2012. *Id.* at 210.

Once Act 160 was enacted, the legislature introduced a bill to provide for a comprehensive assessment of the Vermont Yankee plant. *Id.* The bill originally was titled "An Act Relating to an Independent Safety Assessment of the Vermont Nuclear Facility," and called for "an independent safety assessment" of the Vermont Yankee plant. *Id.* As the legislature considered the bill, "'[s]afety' was either replaced with 'operating,' 'operational,' or 'emergency,' or omitted altogether" but otherwise "little change[d] to the substance of the bill." *Id.* at 211. Notwithstanding these "editorial" revisions, and a change of the title to refer to a "Vertical Audit and Reliability Assessment," the legislators still referred to it as a safety study. *Id.* at 211-12 ("I support the review of the safety of Vermont Yankee."). As a senator introducing the bill explained: "[W]hat this bill does, in essence, is the governor has called for an independent safety assessment, the congressional delegation has called for an independent safety assessment, the Legislature has talked about the need to do something. What this bill does is define what we mean by an assessment. And we talk about a reliability assessment because safety is not within our purview." *Id.* at 212 (alteration in original).

The bill passed and became Act 189, leading to a years-long study of the Vermont Yankee plant that included analyzing systems crucial to the safe generation of nuclear power that are subject to exclusive NRC regulation. *Id.* at 212-13. The 300-page study concluded the plant was "operated reliably." *Id.* Nonetheless, the legislature never voted to approve continued operation of the Vermont Yankee plant. *Id.* at 215-16. Rather, ENVY and ENOI filed suit, 11 months before expiration of their NRC license. *Id.* at 217.

After examining this legislative history in detail, the district court noted that, although "'a legislature's stated reasons will generally get deference,' a Court cannot be 'so naive' in its purpose inquiry to accept 'any transparent claim.'" *Id.* at 228 (quoting *McCreary County v. ACLU of Ky.*, 545 U.S. 844, 863-64 (2005)). "Inquiry into the legislative history of Act 160 is particularly important here, where there is evidence the statute was motivated by and grounded in radiological safety concerns, and the statute on its face empowers future legislatures to apply the statute to deny continued operation for radiological safety reasons and evade review." *Id.* The district court thus concluded that "concerns regarding the radiological safety of Vermont Yankee were a primary motivating force for giving the legislature the power to take no action" and thereby disallow continued operation. *Id.* at 229. "[R]eferences, almost too numerous to count . . . reveal legislators' radiological safety motivations and reflect their wish to empower the legislature to address their constituents' fear of radiological risk, and beliefs that the plant was too unsafe to operate . . . ." *Id.* Beyond that, Act 160

lacked a plausible non-safety purpose, a consideration that, even apart from explicit mentions of safety in the legislative record, demonstrated circumstantially that the law was motivated by safety concerns. *Id.* at 229-30.

Likewise, the district court found Act 74, related to SNF storage, preempted because "the legislature's desire and intent to regulate the radiological safety of dry cask storage is crystal clear." *Id.* at 231. Thus, even though the laws at issue had been largely scrubbed of any safety language, the legislative record left no doubt that the legislature had acted based on radiological safety concerns.

The Second Circuit affirmed in relevant part. *Entergy Nuclear*, 733 F.3d at 398. Reasoning that this Court has "defined the preempted field, in part, by reference to the motivation behind the state law" in analyzing preemption under the AEA, the Second Circuit "agree[d] with the district court's careful analysis of the legislative intent motivating Vermont's enactment of Act 160 insofar as the district court identified radiological safety as the Vermont legislature's primary purpose in enacting the statute." *Id.* at 419-20 (internal quotation marks omitted).[4]

2. New York

The Second Circuit had issued a similar ruling nearly thirty years earlier concerning safety-based regulation by New York's Suffolk County of the Shoreham Nuclear Plant. As construction of the plant

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[4] Following nearly a decade of disputes, the Vermont Yankee plant announced in 2012 its intention to shut down at the end of 2014 for economic reasons.

neared completion, Suffolk County filed suit against the plant's owner, Long Island Lighting Co. ("LILCO"), bringing an array of state-law claims. *Suffolk County v. Long Island Lighting Co.*, 554 F. Supp. 399, 402 (E.D.N.Y. 1983), *aff'd*, 728 F.2d 52 (2d Cir. 1984). The County alleged that construction defects had caused the cost of constructing Shoreham to balloon and that certain costs would be passed onto ratepayers, and sought damages related to the state-law claims. *Id.* at 402-03. But its complaint pointed to design and construction problems, including those that allegedly failed to comply with AEA regulations, and sought as a remedy an inspection and suspension in operation. *Id.* at 402-03. Although the County purported to base its claims on facially permissible concerns about cost overruns during construction, the district court held that the County had used this cost overrun concern as a pretext for its true purpose—namely, to impose additional safety inspections and regulations on the Shoreham plant. *Id.* at 405.

The Second Circuit affirmed, rejecting the County's argument that the AEA "does not preempt its tort and contract claims because those claims are not directed at radiological safety hazards—an area concededly reserved to the NRC—but rather at the 'pocketbook' issue of unreasonable and excessive cost." 728 F.2d at 56. The Second Circuit explained that "safety concerns pervade the complaint." *Id.* at 59. Beyond the safety concerns animating the complaint, the County impermissibly sought to invade the NRC's exclusive regulatory authority. *Id.* The Second Circuit thus concluded that Suffolk County's "only avenue . . . is to continue its proceedings in the administrative forum—the NRC

for safety-related concerns and the [New York State Public Service Commission] for economic claims." *Id.* at 64.

Undeterred by this unsuccessful lawsuit, Suffolk County withdrew from emergency response planning to prevent Shoreham from complying with NRC regulations requiring local government participation in such planning. *Long Island Lighting Co. v. Suffolk County*, 628 F. Supp. 654, 659 (E.D.N.Y. 1986). When the NRC appeared prepared to allow Shoreham special dispensation to move toward operation without such local participation, the Suffolk County legislature used its police power to enact a local law that criminalized participation in a test of the emergency plan involving simulation of local government roles. *Id.* at 659. Violation of the local law was a misdemeanor, punishable by a year in jail and $1,000 fine. *Id.*

With a proposed test of the emergency plan weeks away, LILCO sued Suffolk County, seeking to enjoin application of the local law as preempted. *Id.* at 660. The district court held not only that the Suffolk County law "impermissibly interferes with a preempted federal area," but also that by "failing to articulate a non-safety rationale, Suffolk County impermissibly intruded into a federally preempted area when it enacted" the law. *Id.* at 665. Despite the fact that States and local governments retain *some* authority with respect to nuclear power plants, *id.*, the district court could not ignore the fact that "[t]he County is on record . . . as opposing the opening of the Shoreham facility on the grounds that no emergency evacuation plan is safe for Suffolk County." *Id.* Thus, because the County passed the law "in an attempt to

continue its opposition to the Shoreham facility on the basis of a perceived radiological hazard," the court concluded that the County had "impermissibly intruded into a sphere of authority reserved exclusively to the federal government by Congress." *Id.* at 666.

In the end, the Shoreham Nuclear Plant never commenced commercial operation due to the dispute over the evacuation plans. Ultimately, LILCO settled with the State of New York in 1989, and billions of dollars in ultimately unnecessary construction costs were funded by the ratepayers.[5]

B. The Lower Courts Also Have Invalidated Pretextual Efforts To Regulate Storage And Disposal Of Nuclear Materials

Certain States also have exercised facially permissible authority to impermissibly regulate the transportation, storage, and management of SNF and other radiologically contaminated materials based on nuclear safety concerns. In this area too, lower courts have found that state action is preempted by federal law.

1. Utah

In 1997, a company named Private Fuel Storage began to lease Skull Valley reservation tribal land in order to build an SNF storage facility. *Skull Valley Band of Goshute Indians v. Nielson*, 376 F.3d 1223, 1228 (10th Cir. 2004), *cert. denied sub nom., Nielson v. Private Fuel Storage, L.L.C.*, 546 U.S. 1060 (2005)

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[5] *See* Dan Fagin, *Lights Out at Shoreham*, Newsday (Nov. 30, 2007), https://bit.ly/2v3ZLcR.

The company applied for a spent fuel storage license to the NRC. *Id.*

In the years that followed, Utah enacted a complicated web of state regulations to discourage and to forestall any SNF from being transported or stored in Utah. *See id.* In essence, Utah enacted laws that made the Skull Valley project impossible and the cost associated with even pursuing a license prohibitive.

First, Utah passed a new law prohibiting the transfer, storage, treatment, or disposal of high-level nuclear waste in the State. *Id.* It also provided that the governor, along with county officials and the state legislature, could separately approve an SNF storage facility if a license was issued by the NRC and upheld by a court. *Id.* at 1228-29. The law required state licensing by the Department of Environmental Quality, including an onerous application process. *Id.* at 1229. The State's Department of Transportation had the authority to approve any transportation of SNF. *Id.* Further, the law required substantial fees in order to apply for and obtain a license to manage SNF in Utah, including a non-refundable *application fee* of $5 million and coverage for 75% of unfunded potential liabilities, potentially in the hundreds of millions or billions of dollars. *Id.* The law also revoked limited liability protections for SNF storage facilities, placing the owners and operators at personal risk, a requirement otherwise unheard of in Utah's corporate governance laws. *See id.*

Second, the Utah legislature empowered county officials to reject all proposals for storing or transporting SNF, or to enact a comprehensive land use plan for health and general well-being if any SNF

work was approved. *Id.* at 1229-30. Additionally, county governments were barred from providing municipal services to SNF facilities, including fire, garbage, water, sewer, and electricity, among others. *Id.* at 1230.

Finally, Utah departed from its general policy of allowing the Department of Transportation to regulate rail crossings in favor of a requirement that any dispute regarding an SNF facility's use of rail crossings be administered only after agreement of the governor and legislature. *Id.* Utah also designated additional roads statewide as public safety interest highways, thereby allowing the Department of Transportation to control those roads, divested the county of control over the access road to the proposed facility, and required gubernatorial and legislative agreement before eminent domain could be used for an SNF company. *Id.*

In 2001, after nearly four years of this expanding web of laws and regulations, Skull Valley Band filed suit, alleging that Utah had overstepped the bounds of its police power in enacting laws designed to frustrate the establishment of an SNF facility based on nuclear safety concerns. *Skull Valley Band of Goshute Indians v. Leavitt*, 215 F. Supp. 2d 1232, 1238 (D. Utah 2002). The district court granted summary judgment to Skull Valley Band, ruling, *inter alia*, that, while Utah normally has every right to regulate the traffic on its roads, it may not do so for an impermissible nuclear safety purpose. *Id.* at 1249 (concluding that the road restrictions "directly and substantially affect the decisions made by those who build or operate nuclear facilities concerning

radiological safety levels and fall within the pre-empted field").

The Tenth Circuit affirmed, holding that "a state cannot use its authority" in traditional areas of regulation "as a means of regulating radiological hazards." 376 F.3d at 1248. The court noted that, among other things, a $5 million application fee for a license to manage SNF, untethered to any costs the State would bear in processing the application, laid bare the motivating purpose of nuclear safety. *See id.* at 1246.

2. Washington, Kentucky, Maine, and Connecticut

Other cases similarly illustrate that some States have used facially legitimate state authority as a way to regulate storage and disposal of radioactive materials based on radiological safety concerns.

For instance, in *United States v. Manning*, 527 F.3d 828 (9th Cir. 2008), the Ninth Circuit held preempted Washington's "Cleanup Priority Act," a law enacted based on a ballot initiative that concerned the treatment of mixed waste. The law related to the Hanford Nuclear Reservation within the State, a facility operated by the Department of Energy that served as a treatment, storage, and disposal site for radioactive and non-radioactive hazardous waste. *Id.* at 830-31. Washington residents had voted on a ballot measure "to prevent the addition of new radioactive and hazardous waste to the Hanford nuclear reservation until the cleanup of existing contamination is complete." *Id.* at 831 (internal quotation marks omitted).

The United States Government challenged the law as preempted, and the district court and Ninth Circuit both agreed that it was. *Id.* While the State could regulate the non-radioactive hazardous components of mixed waste, in this instance, the law's policy section revealed as its purpose that it was "the State's intent to regulate radioactive safety." *Id.* at 837 (noting law described "Hanford as a dump for 'radioactive and/or hazardous or toxic wastes'" and "warn[ed] that Washington's economy could be harmed 'from any accident releasing radiation'"); *United States v. Manning*, 434 F. Supp. 2d 988, 1003 (E.D. Wa. 2006) ("[T]he true aim of the [law] is not the hazardous waste component of mixed waste, but rather the radioactive component."). Thus, the Ninth Circuit held that "[a] key purpose of the CPA is to regulate the radioactive component of mixed waste, as well as the nonradioactive component, for health and safety reasons. Accordingly, the CPA is preempted by the AEA." *Id.* at 839.

In *United States v. Commonwealth of Kentucky*, 252 F.3d 816, 824 (6th Cir. 2001), *cert. denied sub nom., Kentucky Natural Resources & Environmental Protection Cabinet v. United States*, 534 U.S. 973 (2001), the Sixth Circuit rejected Kentucky's attempt to regulate radioactive waste through permitting conditions for the disposal of solid waste. Kentucky sought to prohibit a uranium enrichment facility owned by the Department of Energy from disposing of "[s]olid waste that exhibits radioactivity above de minimis levels." *Id.* at 820. The Sixth Circuit noted that "the AEA preempts any state attempt to regulate materials covered by the Act for safety purposes." *Id.* at 823. The conditions sought to limit "the amount of

'radioactivity' and 'radionuclides' that DOE may place in its landfill" and "impose these conditions to protect human health and the environment." *Id.* Thus, although the AEA does not regulate all solid waste, Kentucky was preempted from regulating the radioactive component of solid waste because the permit conditions "regulate materials covered by the AEA based on . . . safety and health concerns." *Id.*

In both the Washington and Kentucky cases, the courts determined that an impermissible nuclear safety purpose preempted the regulations even though the States facially regulated materials under their authority and the AEA did not authorize the NRC to regulate such materials. *Manning*, 527 F.3d at 836 ("Unquestionably, the State has the authority to regulate nonradioactive hazardous materials."); *Commonwealth of Kentucky*, 252 F.3d at 822 (noting that, under the applicable regulatory scheme, "state and local governments will play a lead role in solid waste regulation").

Even when the lower courts have rejected challenges to such State laws, they have inspected the purpose behind the laws, and sent warning signals to States to stay within the permissible realm of their non-preempted police power authority. For instance, in *Connecticut Yankee Atomic Power Co. v. Haddam Planning & Zoning Commission*, 2001 WL 1898262, at *3 (D. Conn. Apr. 23, 2001), *aff'd* 19 F. App'x 21 (2d Cir. 2001), the owners of the Connecticut Yankee nuclear plant sought to enjoin as preempted a zoning regulation that had changed the zoning of the plant to residential after the plant's construction. When Connecticut Yankee—which already had operated for decades and had started decommissioning—sought

approval to re-zone the property to industrial to allow it to construct a dry cask storage facility, its zoning application was denied. *Id.* Although the local official had "publicly stated that the Town would seek to preclude implementation of the planned dry cask storage system regardless of the outcome of the Zoning proceeding," the district court required Connecticut Yankee to seek a building permit to begin construction on the dry cask storage facility before the court would address the preemption question. *Id.* at *4. Nonetheless, the district court noted that the preemption argument was strong, and likely would succeed if the State thwarted Connecticut Yankee's ability to build the dry cask storage facility. *Id.* at *4 n.1.

In *Maine Yankee Atomic Power Co. v. Bonsey*, 107 F. Supp. 2d 47 (D. Me. 2000), the district court likewise cautioned Maine against a nuclear safety-motivated use of its facially legitimate state authority. Maine's Site Law required approval of the construction or operation of "any development of state or regional significance that may substantially affect the environment." *Id.* at 49. Although the law had not existed at the time the plant was constructed, Maine asserted that the law applied to the nuclear power plant during its decommissioning, specifically to construction of the dry cask storage facility. *Id.* The owners of Maine Yankee challenged the application of the Site Law to the plant, but the district court held the law could apply to the extent Maine used it to regulate "for purposes other than protection against radiation hazards." *Id.* at 54. Still, the district court admonished the State to stay within its permissible sphere, in light of the fact that "[o]ne

might take a hint from the Board's apparent interest in matters nuclear—its demand for the safety report on the proposed storage system for example," that it intended to regulate for a radiological purpose. *Id.* In this same vein, the State "cannot employ a 'financial capacity' requirement to indirectly regulate in the field of spent nuclear fuel storage." *Id.* at 55.

While the State had not yet exceeded its authority, the district court clearly signaled that it would grant the appropriate relief if Maine did overreach: "Perhaps the state's conduct of its administrative proceedings will reveal a transparent effort to exercise regulatory authority reserved to the federal government. Perhaps not. Time will tell. If so, declaratory and injunctive relief will surely and swiftly follow." *Id.* at 56.

C. A State's Imposition Of Financial Requirements On Decommissioning Is Preempted When Imposed For The Purpose of Nuclear Safety

A preemption challenge to a State's attempts to regulate decommissioning on an "economic" basis also has been successful when the evidence showed that the State's true purpose stemmed from a nuclear safety concern.

In 1981, the owners of the Maine Yankee nuclear plant sought approval from FERC to adjust its rates to reflect the costs of decommissioning the plant. *Me. Yankee Power v. Me. Pub. Util.*, 581 A.2d 799, 800 (Me. 1990). While the FERC proceeding was pending, the Maine legislature enacted the Nuclear Decommissioning Financing Act ("NDFA"). *Id.* The NDFA required any nuclear plant operator to file a

decommissioning plan with the Maine Public Utilities Commission ("MPUC") for review and approval and established decommissioning financing requirements. *Id.* Shortly thereafter, Maine Yankee reached a settlement with FERC to establish a decommissioning financing plan, and Maine Yankee submitted the plan to MPUC under the NDFA, which eventually was approved in 1983. *Id.* at 801-02.

In 1988, FERC permitted Maine Yankee to adjust its decommissioning financing plan. *Id.* at 802. Maine Yankee again moved that the MPUC approve the amendment to the plan, but the MPUC rejected the amendment. *Id.* Maine Yankee appealed MPUC's decision and challenged the constitutionality of the NDFA. *Id.* Although the MPUC attempted to justify its decommissioning regulations as economic in nature and thus outside of the purview of the NRC and the AEA, this argument failed. *Id.* at 805.

The Maine Supreme Court, following this Court's decision in *PG&E*, reasoned that, "[b]ecause Congress has clearly manifested an intent to maintain 'complete control over the safety and nuclear aspects of energy generation,'" the NDFA was preempted by the AEA. *Id.* at 805-06 (quoting *PG&E*, 461 U.S. at 212). This was so even though the State had purportedly targeted the NDFA at the economic impact of decommissioning nuclear facilities. Initially, the court explained that, even if "regulatory actions may have an economic impact," it "does not mean that they lie outside NRC's jurisdiction." *Id.* at 805 (quoting 53 Fed. Reg. 24018-01, 24073). In addition, looking to the legislative history of the NDFA, it was clear that the State sought to regulate safety aspects of nuclear decommissioning. *Id.* The

NDFA was enacted, in part, because "timely proper decommissioning of any nuclear power plant . . . is essential to protect public health, safety, and the environment." *Id.* (alteration in original). The court concluded that any attempt to regulate decommissioning is preempted if it impermissibly infringes the NRC's exclusive regulatory authority regarding the safety aspects of nuclear decommissioning, regardless of how the state legislature frames the regulation. *Id.* at 805-06.

II. STATE REGULATION OF RADIOLOGICAL SAFETY IS COSTLY AND UNNECESSARY GIVEN THE NRC'S COMPREHENSIVE REGULATIONS

When States regulate the nuclear field in an effort to address safety concerns, they not only intrude upon an exclusive federal sphere but also impose inefficiencies and costs that can be prohibitive. When States make pretextual forays into the regulation of the nuclear industry, the owners and operators are forced to undertake additional expense to comply with such regulations or else to challenge them. Such expense hampers the successful operation and decommissioning of the Nation's nuclear facilities.

The regulatory framework and enforcement mechanisms used by the NRC and reviewing courts to enforce the AEA are clear and predictable. Parties can participate in NRC rulemaking and follow NRC actions and processes to determine how the NRC might act in any particular situation. The operable standards apply across all States, regardless of local political imperatives. Any departure from the clarity provided in NRC regulations and rulemaking introduces uncertainty and inefficiencies and

complicates the operation and administration of America's nuclear power generation.

In the Vermont Yankee case discussed above, the Second Circuit agreed with the district court that ENOI and ENVY would face irreparable harm from enforcement of the preempted statute—to wit, a complete shut down of Vermont Yankee. *Entergy Nuclear*, 733 F.3d at 423. Undoubtedly, such a result would have had deleterious financial consequences for ENVY and ENOI. But the actions of Vermont—motivated by safety concerns—already had imposed substantial costs. ENVY and ENOI were forced to undertake significant political expenditures. *See, e.g.*, *Entergy Nuclear*, 838 F. Supp. 2d at 194-95, 199-202. The threat of a potential shutdown also required costly employment measures to retain the specialized workers who run the Vermont Yankee plant. *Entergy Nuclear Vt. Yankee, LLC v. Shumlin*, No. 1:11–cv–99–jgm, 2011 WL 2811317, at *6 (D. Vt. July 18, 2011). And, of course, the litigation itself imposed additional costs. *See, e.g.*, *Entergy Nuclear*, 838 F. Supp. 2d at 189 (referencing preliminary injunction hearing and three-day bench trial on the merits).

When the Federal Circuit had occasion to review ENVY's payment of millions of dollars into the Clean Energy Development Fund as part of a lawsuit related to the Department of Energy's breach of its contractual obligation to take possession of SNF for permanent disposal, it determined these costs were likely preempted as well. *Vt. Yankee Nuclear Power Corp. v. Entergy Nuclear Vt. Yankee, LLC*, 683 F.3d 1330 (Fed. Cir. 2012). While ENVY had been required to make payments into the Clean Energy Development Fund as one step to securing approval

to construct a dry cask storage facility, the Federal Circuit concluded that those costs were not recoverable because Vermont's action in requiring such payment was preempted (and could have been successfully challenged). *Id.* at 1346-47. As the Federal Circuit explained: "The imposed fees bear no relationship to any costs incurred by the state or its citizens as a result of the construction of the dry storage facility. It would not be inaccurate to characterize the fee as a form of blackmail for the state approval of the construction." *Id.* at 1346. The Federal Circuit concluded that, while ENVY's choice to acquiesce to the State's demand for money may have been reasonable from a business perspective, the costs could not be recovered because these fees were preempted, and therefore not foreseeable as damages for the Department of Energy's breach of contract. *Id.* at 1348 ("Just because it may have been in ENVY's best interest to maintain good relations with the state and to agree to pay a fee that was likely preempted by federal law does not render the fee recoverable.").

In its efforts to secure continued operation of the Vermont Yankee plant, ENVY resisted entering into a below-market agreement with Vermont for the purchase of the power the plant generated, opting to sue instead. But by that point, ENOI and ENVY already had complied with the years-long "reliability" study—the fees for which were all billed back to ENVY. *See* 838 F. Supp. 2d at 233-234.

In the case of Shoreham, LILCO had to defend against numerous lawsuits from Suffolk County and public interest groups and then was forced to bring its own lawsuit. *See Long Island Lighting Co.*, 728 F.2d at 55. As a result of the myriad ways in which Suffolk

County (along with other opponents of the plant) sought to prevent the operation of the Shoreham plant, the plant never commenced commercial operation.[6]

The substantial burden Utah attempted to impose on Skull Valley Band in establishing an SNF facility was not only a regulatory headache, it was also exorbitantly expensive. For example, the *application fee* of $5 million likely would have been cost prohibitive, and dissuaded any such potential applicant. *Skull Valley*, 376 F.3d at 1228-29. Utah sought to extract from a potential licensee outsized funds that were likely to be unavailable and thus render the project's actual ability to operate in Utah moot. Indeed, even if a storage facility had been able to withstand the application process, disallowing municipal services to any SNF facility would have greatly increased costs for operators, likely rendering such a facility cost prohibitive to operate.

The fact that courts have held such laws preempted has not always dissuaded certain States in their efforts to exceed the bounds of their authority. Despite decades of decisions holding safety-motivated regulation preempted, Massachusetts's legislators have attempted multiple times in recent years to enact laws that would encumber the decommissioning process. For instance, Massachusetts lawmakers sought to require a post-closure fee of $25 million for every year decommissioning is not completed after a plant has been closed for five years. Mass. Bill S. 1837 (2017), Mass. Bill H. 1765 (2017). A state

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[6] Carl MacGowan, *38 Years After Massive Protest, Shoreham Nuke Plant Sits Empty*, Newsday (June 3, 2017), https://nwsdy.li/2mJfZUQ.

representative explained that "'[e]stablishing the trust fund would also ensure that the spent fuel rods still on site are properly handled post-closure.'"[7] Another bill would have allowed assessments against the owners and operators of nuclear power plants that "could pose potential health risks to the commonwealth's residents in the event of an incident" of up to $250,000 per year. Mass. Bill S. 1836 (2017). Yet another bill sought to require each licensee to fund emergency response expenditures by the State or local governments prior to the transfer of SNF to dry cask storage. Mass. Bill H. 1147 (2017).

Judicial inquiry into the purposes behind such laws is necessary to prevent the use of facially legitimate state regulation for preempted ends. Absent judicial review, States would be free, using non-safety language, to frustrate federal policy, federal regulations, and federal law entrusting nuclear safety exclusively to the NRC and preventing the industry from being saddled with unnecessary state-imposed costs. Because the federal government occupies the entire field of nuclear safety, promulgates detailed and wide-ranging regulations to enforce such safety, and provides for the security of nuclear materials and the Nation's power grid, any additional costs impermissibly imposed by the States hobble the Nation's ability to meet and to maintain its energy generation needs.

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[7] Matthew Muratore, *Should the Pilgrim Nuclear Power Station Be Required to Pay an Annual $25 Million Decommissioning Fee*, Bos. Globe (Nov. 22, 2017), https://bit.ly/2NMrab7.

CONCLUSION

The Court should reverse the judgment of the Fourth Circuit.

Respectfully submitted,

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IN THE

Supreme Court of the United States

VIRGINIA URANIUM, *et al.*,

Petitioners,

v.

JOHN WARREN, IN HIS OFFICIAL CAPACITY AS DIRECTOR OF THE VIRGINIA DEPARTMENT OF MINES, MINERALS, AND ENERGY, *et al.*,

Respondents.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT

BRIEF OF *AMICI CURIAE* FORMER NUCLEAR REGULATORS IN SUPPORT OF PETITIONERS

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INTEREST OF *AMICI CURIAE*[1]

Amici curiae are fourteen former senior nuclear regulators for the United States Nuclear Regulatory Commission ("NRC" or "Commission"). Collectively, *amici curiae* have over 350 years of knowledge of and experience with the regulation of radiological health, safety, and environmental issues, including those associated with uranium milling and long-term tailings management.

The *amici curiae* offer their knowledge and experience as former NRC regulators to address the concerns and common misconceptions about uranium and its byproducts that appear to have led to Virginia's continued moratorium on uranium mining[2], and to explain how NRC's current licensing requirements, dose limits, and regulatory oversight and enforcement authority ensure that there will be no significant harm to health, safety, or the environment from a licensed uranium milling operation or tailings disposal and management.

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1. No counsel for a party authored this brief in whole or in part. *Amici curiae* advise that *amicus* Dr. Malcolm Knapp was engaged as an expert witness on behalf of Petitioner Virginia Uranium in a Virginia state court action against the Commonwealth of Virginia related to the Coles Hill project, in which Virginia Uranium was represented by counsel for Petitioners here. Dr. Knapp was not compensated by Petitioners (or anyone else) for his participation in this brief. No person made a monetary contribution to or intended to fund the preparation or submission of this brief, other than the *amici*, or their attorneys.

By filing statements of consent with the Court, the parties have consented to the filing of this *amicus curiae* brief.

2. *See* Pet.Br. at 15-19.

Amici curiae include former NRC officials **L. Joseph Callan**, former Executive Director for Operations[3]; **Francis X. "Chip" Cameron**, former Assistant General Counsel; **Dr. Nils J. Diaz**, former NRC Commissioner and Chairman; **John T. Greeves**, former Director, Division of Waste Management; **Joseph R. Gray**, former Associate General Counsel for Licensing and Regulation; **Dr. Malcolm R. Knapp**, former Deputy Executive Director for Regulatory Effectiveness; **James Lieberman**, former Director of Enforcement; **Jeffrey S. Merrifield**, former NRC Commissioner; **Ellis W. Merschoff**, former Deputy Executive Director for Operations; **C. William Reamer**, former Director, High-Level Waste Repository Safety Division, Office of Nuclear Materials Safety and Safeguards; **Luis Reyes**, former Executive Director for Operations; **Hugh L. Thompson, Jr.**, former Deputy Executive Director for Regulatory Programs; **Dr. William D. Travers**, former Executive Director for Operations; and **Martin Virgilio**, former Deputy Executive Director for Operations.

Summaries of the *amici curiae*'s relevant background and experience are in the Appendix to this brief.

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3. The Executive Director for Operations is NRC's chief operating officer, discharging the operational and administrative functions of the Commission, supervising and coordinating policy development, managing operational activities, and implementing policy directives. Program offices reporting to the Executive Director of Operations ensure the safe commercial production, use, and disposal of nuclear materials; one of these, the Office of Nuclear Material Safety and Safeguards, regulates activities related to uranium recovery, including waste disposal and management. NRC's four regional offices conduct the inspection, enforcement, and emergency response programs for licensees located within their borders.

BACKGROUND: THE ATOMIC ENERGY ACT AND NRC'S MISSION AND AUTHORITY TO PROTECT PUBLIC HEALTH & ENVIRONMENT

Congress adopted the Atomic Energy Act of 1954 ("AEA"), 42 U.S.C. § 2011 *et seq.*, "to encourage widespread participation in the development and utilization of atomic energy for peaceful purposes to the maximum extent consistent with the common defense and security and with the health and safety of the public[.]" 42 U.S.C. § 2013(d). Because nuclear safety is critical to the development of the civilian nuclear industry, Congress designed the AEA "to insure that nuclear technology be safe enough for widespread development and use[.]" *Pacific Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 213 (1983).

With the enactment of the National Environmental Policy Act of 1969, 42 U.S.C. § 4321 *et seq.*, the Atomic Energy Commission's regulatory mandate was explicitly expanded to cover the environmental impact of the activities regulated by the Commission. *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519 (1978).

The Energy Reorganization Act of 1974, 42 U.S.C. § 5801 *et seq.*, established the NRC as an independent agency responsible for nuclear licensing and related regulatory functions, and increased the number and range of NRC's safety responsibilities over those of its predecessor, the Atomic Energy Commission. *English v. General Elec. Co.* 496 U.S. 72, 81 (1990).

Congress further expanded the NRC's jurisdiction, with specific attention to uranium milling and tailings management, with the passage in 1978 of the Uranium Mill Tailings Radiation Control Act ("UMTRCA"), Pub. L. No. 95-604, 42 U.S.C. § 7901 *et. seq.*

NRC protects the health and safety of the public and the environment by licensing and regulating civilian use of radioactive materials, including source material (uranium and thorium), enriched uranium and plutonium, and byproduct material, including mill tailings. NRC employs over 3,000 people at five primary locations, and has an annual budget of about $1 billion. Approximately 90% of NRC's budget authority is recovered from licensees and license applicants.

SUMMARY OF ARGUMENT

The Virginia legislature's "radiological safety concerns" about "uranium milling and uranium tailings management," Pet.App.26a-27a (Traxler, J., dissenting), such as possible contamination of the drinking water supply by tailings piles, are based on common misconceptions about uranium, radiation, and the federal regulatory process. While radioactive materials must be managed with due care, the NRC is chartered, funded, and staffed to ensure that all aspects of the nuclear fuel cycle are executed safely, and are protective of public health and the environment.

Uranium milling and tailings management, as licensed and regulated by NRC today, do not pose any significant risk to public health or the environment. NRC has exercised its Congressionally-mandated authority to develop and implement comprehensive regulations and effective oversight over these activities.

NRC's layered approach to protect public health and safety and the environment employs carefully crafted regulations incorporating a conservative margin of safety, comprehensive review of license applications and renewals to ensure licensees meet all regulatory criteria, detailed guidance for licensees and prospective licensees, mandatory monitoring, reporting, and on-site inspections and investigations of licensee operations, and enforcement action by NRC if necessary to assure compliance.

ARGUMENT

NRC's regulations and oversight of the uranium milling and tailings management processes provide a high margin of safety for workers, the public, and the environment—both during the operational life of the facility and afterward. NRC's regulations and oversight program have developed through the agency's expertise and experience, and are in line with modern international standards and practices for conventional uranium mining and tailings disposal, which have proven effective.

NRC's radiological safety standards require licensed uranium milling and tailings disposal facilities—like all NRC-licensed facilities—to maintain radiation dose levels as low as reasonably achievable, and in no case higher than NRC's numerical standards, which are set far below levels likely to cause harm.

Before construction of uranium milling facilities and mill tailings impoundments can even begin, prospective licensees must demonstrate to NRC that the planned facilities will meet regulatory requirements designed to ensure the operational safety of the mill and the safe disposal and effective containment of mill tailings for the

long term without the need for active maintenance. NRC inspects and monitors licensees throughout construction and active operations, and at decommissioning, the licensee must return the site and the tailings impoundments to levels similar to the natural surroundings. Ownership of the land on which tailings impoundments are located is then transferred to the Federal or state government for long-term surveillance.

I. The Uranium Recovery Process and the Commission's Regulatory Authority

A. Uranium in the Natural Environment

Uranium is a naturally-occurring element with an average concentration of 2.8 parts per million in the Earth's crust. While large deposits like the Coles Hill orebody are rare, traces of uranium are found almost everywhere on Earth—it is about 500 times more abundant than gold, and about as common as tin. Uranium is commonly found in bedrock materials such as granite and limestone, and trace amounts from natural sources are commonly found in air and water. Vast amounts of uranium are in the world's oceans, although in very low concentrations.

Uranium, whether before or after it is mined and milled, emits radiation, but at levels that are not considered hazardous. For example, a handful of natural uranium ore emits about as much radiation as 10 bananas.[4]

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4. Canadian Nuclear Association, How Radioactive Is Uranium Ore?, http://talknuclear.ca/2014/08/just-how-radioactive-is-uranium-ore/ (last visited July 24, 2018). Bananas contain the naturally-occurring radioactive isotope potassium-40.

Natural uranium is primarily (>99%) composed of U-238, an isotope with very low radioactivity and a half-life of over 4 billion years, meaning that it emits radiation at a very slow rate. Natural uranium also has minute quantities of more radioactive isotopes U-235 and U-234; the enrichment process increases the U-235 concentration to create nuclear fuel.

Uranium's radioactive decay produces radon, a radioactive gas. While exposure to high levels of radon over an extended period may be harmful, everyone on Earth is exposed to radon from natural sources, accounting for most of the background dose.[5]

B. Uranium Mining, Milling, and Tailings Management

Uranium recovery involves three stages: mining, milling, and tailings management. After mining, uranium ore goes to a milling facility to be crushed and put through a chemical leaching process to extract the uranium oxide (principally U_3O_8), known as "yellowcake," as a first step in the production of nuclear fuel.[6] Yellowcake is then transported to conversion and enrichment facilities, for fabrication into nuclear fuel.[7]

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5. *See infra* notes 29-36 and accompanying text.

6. NRC, Uranium Recovery, https://www.nrc.gov/materials/uranium-recovery.html (last visited July 24, 2018).

7. NRC, Uranium Conversion, https://www.nrc.gov/materials/fuel-cycle-fac/ur-conversion.html (last visited July 24, 2018).

Uranium at the yellowcake stage has the same radioactivity as it did when it was underground. The milling process extracts most of the uranium from the ore, but does not alter the proportions of the uranium isotopes, which remain at their natural concentrations. In this form, it is barely more radioactive than the granite used in buildings.[8] There is no nuclear criticality hazard and little fire or explosive risk. Radiological hazards are also low, as uranium has little penetrating radiation and only moderate non-penetrating radiation. The primary industrial hazards associated with uranium milling are the occupational hazards found in any metal milling operation that uses chemical extraction, as well as the chemical toxicity of the material itself.

The primary radiological hazard is from radium in the fine-grained, sandy waste byproduct material known as "mill tailings," which remains after the milling process extracts and concentrates the uranium from the ore. Tailings are deposited in an impoundment or "mill tailings pile," which is carefully regulated, monitored, and controlled because of the remaining amounts of uranium and other metals, as well as radium produced by uranium's radioactive decay, which further decays to produce radon.

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8. World Nuclear Association, Radioactive Waste Management, http://www.world-nuclear.org/information-library/nuclear-fuel-cycle/nuclear-wastes/radioactive-waste-management.aspx (last visited July 24, 2018).

C. NRC's Regulatory Authority and Obligation to Ensure Safety of Uranium Milling and Tailings Management

NRC licenses are required to "transfer or receive in interstate commerce, manufacture, produce, transfer, acquire, own, possess, import, or export" any radioactive "source material," including natural uranium after it has been removed from nature, and "byproduct material," one form of which is uranium milling tailings. 42 U.S.C. §§ 2092; 2111; 2014(z); 2014(e)(2).[9] The NRC's licensing authority for the uranium recovery process begins at the milling stage,[10] and includes both the milling of uranium ore and mill tailings management.

Until 1978, uranium mill tailings were not federally regulated and sometimes were even used as building materials.[11] As a result, large quantities of tailings accumulated at milling sites, particularly in Western states, and there were several incidents involving breaches of poorly designed tailings impoundments.[12]

Congress added uranium mill tailings to AEA's definition of licensable "byproduct material" in the

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9. NRC may delegate by agreement its licensing and regulatory authority to states, provided the state's regulation is at least as strict as NRC's. 42 U.S.C. § 2021. Virginia's agreement with NRC does not cover uranium milling or tailings disposal.

10. Virginia would have regulatory control over the mining component.

11. *See* H.R. REP. No. 1480, pt. I, 95th Cong., 2d Sess.

12. *Id.*

Uranium Mill Tailings Radiation Control Act of 1978, which requires NRC to prevent such problems in future milling operations. UMTRCA requires NRC to protect public health by ensuring that mill tailings are stabilized and controlled in a safe and environmentally sound manner to minimize or eliminate radiological and non-radiological health hazards to the public. 42 U.S.C § 2114. UMTRCA also requires NRC to ensure the licensee's financial capability to meet decontamination, decommissioning, and reclamation obligations, and that title to the tailings disposal site is transferred to the Federal or state government for long-term surveillance and management. *Id.* §§ 2113; 2201(x).

These provisions authorize the NRC to use its regulatory authority to assure that the problems resulting from uranium mill tailings and uranium milling operations that led to the passage of UMTRCA would not recur. And they have not reoccurred.

II. NRC Regulation of Uranium Milling and Tailings Management

NRC regulates uranium milling and disposal of the resulting waste materials by (1) setting and enforcing radiation protection standards, and (2) establishing and overseeing a licensing and inspection program that requires uranium milling and mill tailings operations to control industrial hazards and address waste and decommissioning concerns as a condition of licensing.

Consistent with its mission, NRC focuses its regulatory actions on protecting the health and safety of workers, the public, and the environment in reviewing

license applications and amendments for uranium recovery facilities, developing and releasing for public comment safety evaluations, environmental assessments and environmental impact statements documenting the agency's licensing reviews; inspecting active uranium recovery facilities; and reviewing and overseeing decommissioning plans and activities.

NRC's comprehensive regulations, developed through extensive public comment and reference to international standards and practices, provide a strong foundation to ensure that NRC's licensing, oversight, and enforcement of uranium milling and mill tailings disposal effectively promote safety and protect public health and the environment.

A. NRC's Regulatory Standards for Protection Against Radiation Establish a Substantial Margin of Safety for Workers and the Public

The protective standards that NRC established in Title 10, Part 20 of the Code of Federal Regulations ("Part 20") are designed to keep radiation doses to workers and members of the public within specified limits that provide "a very substantial margin of safety for exposed individuals ... in accordance with present knowledge[.]"[13] By requiring all NRC licensees to also make every reasonable effort to maintain radiation exposures and releases of radioactive materials to unrestricted areas "as low as is reasonably

13. Standards for Protection Against Radiation (1957 Final Rule), 22 Fed. Reg. 548, 549 (January 29, 1957) (noting that "the standards are subject to change with the development of new knowledge.").

achievable (ALARA)," 10 C.F.R. § 20.1101(b), "the degree of protection could be significantly greater than from relying upon the dose limits alone."[14]

At the relatively low levels of radiation exposure in the United States, it is difficult to demonstrate a relationship between exposure and any health effects.[15] The dose limits in Part 20 are therefore based upon what NRC considers an acceptable level of risk to the exposed individual, and are well below dose levels likely to cause harm, with a considerable margin of safety.[16]

NRC generally follows the radiation protection recommendations of the International Commission on Radiological Protection ("ICRP"), an independent, non-governmental organization, which issues widely-followed recommendations and guidance on radiation protection, and its U.S. counterpart, the National Council on Radiation Protection and Measurements ("NCRP").[17] The initial 1957 Part 20 standards substantially agreed with standards NCRP set in 1953 (and later adopted by ICRP), and Part 20 was amended in 1960 to reflect NCRP's revised 1959 standards.[18]

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14. Standards for Protection Against Radiation (1991 Final Rule), 56 Fed. Reg. 23360 (May 21, 1991).

15. *See* NRC, *ALARA Levels for Effluents from Materials Facilities*, Regulatory Guide 8.37 (July 1993), p.2.

16. *See id.*; *see also* 56 Fed. Reg. at 23360-23361.

17. 22 Fed. Reg. at 549; 56 Fed. Reg. at 23361.

18. *See* 79 Fed. Reg. 43284, 43285-43286 (July 25, 2014) (recounting regulatory history of Part 20).

NRC comprehensively revised Part 20 in 1991 to reflect standards issued by the ICRP in 1977 and 1978 and NCRP's 1987 recommendations, including an ALARA requirement.[19] Accordingly, in practice, and by regulatory design, NRC licensees inevitably maintain levels well below Part 20's regulatory limits.[20]

1. Maximum Radiation Dose Levels and Effluent Concentration Limits

All NRC licensees—including uranium mills and tailings disposal sites—must maintain radiation exposures below Part 20 annual dose limits and effluent concentration limits, and demonstrate compliance through routine radiation monitoring and reporting. The current dose limits are consistent with NCRP's current standards, which set a dose limit for which the probability of injury is so low that the risk would be readily acceptable to the average individual and that competent medical authorities would not find deleterious to health.

i. Occupational Workers

The maximum annual dose to workers at a licensed facility is 5,000 millirem[21] per year. 10 C.F.R. § 20.1201(a). Airborne concentrations to which radiation workers may

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19. *See* 56 Fed. Reg. at 23360-23363.

20. *See id.* at 23363; 81 Fed. Reg. 95410, 95411 (Dec. 28, 2016).

21. A millirem ("mrem") is one one-thousandth of a rem, a standard unit of measure for radiation. It is equivalent to 0.01 sievert, a more commonly used standard measurement for radiation outside the United States.

be exposed must also meet strict concentration limits. *Id.* § 20.1201(d).[22] Workers exceeding 10% of the occupational dose limit must receive an annual dose report. *Id.* § 20.2206.[23]

NRC continues to evaluate whether the dose limits should be further reduced.[24] NRC has so far determined that no change is necessary, given the already very high margin of safety of the current standard and the fact that even licensees with the highest exposure levels in the nuclear industry continue to report levels below the ICRP's current occupational dose recommendations.[25]

ii. Members of the Public

The annual dose limit to members of the public from an NRC-licensed operation must be below 100 millirem per year. 10 C.F.R. § 20.1301. Both airborne and liquid effluents released to the accessible environment must meet strict concentration limits to demonstrate compliance

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22. *See also* Part 20, subpart H; NRC, *Methods for Estimating Radioactive and Toxic Airborne Source Terms for Uranium Milling Operations*, Regulatory Guide 3.59 (March 1987).

23. *See also* NRC, *Health Physics Surveys in Uranium Recovery Facilities*, Regulatory Guide 8.30 (Rev. 1, May 2002).

24. *See, e.g.*, 79 Fed. Reg. 43284 (advance notice of proposed rulemaking).

25. *See* 81 Fed. Reg. at 95411 (finding that nuclear industry's current operating procedures and practices protect both occupational workers and members of the public and go beyond the applicable regulatory requirements, such that further reduction of dose limits "would result in little, if any, improvement in occupational or public radiological safety").

with this requirement. *See id.* § 20.1302.[26] NRC requires licensees to use these conservative assumptions in demonstrating compliance with this standard in order to assure that the doses to actual populations in the vicinity of any licensed facility are small fractions of the public dose limit.

iii. Compliance and Reporting

Licensees must conduct surveys and monitoring to assess radiation levels and concentrations of effluents in air and water, such as may be necessary to comply with Part 20 regulations. 10 C.F.R. § 20.1501. Records of routine surveys and monitoring are reviewed at least yearly by NRC.

Licensees must promptly report any significant incidents, exposures, and doses in excess of regulatory limits to allow NRC to assess and coordinate a response. *Id.*, subpart M. If necessary, NRC has authority to enforce dose limits through civil and criminal penalties. *Id.*, subpart O.

All licensees must also maintain a formal radiation protection program "sufficient to ensure compliance" with Part 20 limits and requirements, using procedures and engineering controls "to achieve occupational doses and doses to members of the public that are as low as is reasonably achievable (ALARA)." *Id.* § 20.1101.[27] The

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26. Part 20, Appendix B, Table 2 shows air and water concentrations for various effluents at which continuous exposure over the course of a year would result in a total dose of 50 millirem.

27. Regulatory Guide 8.37, *supra* n.15, addresses the design and implementation of radiation safety program in materials facilities.

ALARA philosophy assumes that any level of radiation exposure carries a commensurate risk, and thus exposures should be minimized when practical.[28]

Licensees must review their radiation protection program content and implementation at least annually, *Id.* § 20.1101(c), and maintain written records of program audits and implementation. *Id.* § 20.2102.

2. Maximum Dose Limits in Perspective

To put the annual maximum dose limits in perspective, it is first important to recognize that everyone on Earth is—and always has been—exposed to some level of naturally-occurring cosmic and terrestrial radiation, and radioactive isotopes naturally present in human bodies.[29] Even extraordinarily high background doses—10,000 millirem or more—do not appear to result in increased cancers or other health problems.[30]

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28. NRC, *Operating Philosophy for Maintaining Occupational and Public Radiation Exposures as Low as Is Reasonably Achievable*, Regulatory Guide 8.10, (Rev. 2, Aug. 2016), p.5. *See also* NRC, *Information Relevant to Ensuring that Occupational Radiation Exposures at Uranium Recovery Facilities Will be ALARA*, Regulatory Guide 8.31 (Rev. 1, May 2002).

29. *See* NRC, Natural Background Sources of Radiation, https://www.nrc.gov/about-nrc/radiation/around-us/sources/nat-bg-sources.html (last visited July 24, 2018).

30. World Nuclear Association, Nuclear Radiation Health Effects, http://www.world-nuclear.org/information-library/safety-and-security/radiation-and-health/nuclear-radiation-and-health-effects.aspx (last visited July 24, 2018) (natural levels in some areas of more than 100 millisieverts (10,000 millirem) do not appear to cause harm).

The average person in the U.S. receives an annual average dose of about 620 mrem from all background sources, of which about half (310 mrem) is from naturally-occurring radiation,[31] mostly from radon produced by the decay of uranium in the natural environment[32], although radon levels vary widely by location.[33] By far, most of the average American's radiation exposure comes from cosmic radiation, the Earth, naturally occurring radon, medical procedures, and computer and television screens—*not* from nuclear energy or uranium mining.[34]

Uranium mines and nuclear facilities together account for only about 0.1% of the average American's annual radiation exposure due to man-made sources.[35] Most man-made radiation exposure is from nuclear medicine and medical procedures (*e.g.*, chest x-ray, 10 mrem; mammogram, 72 mrem; full-body CT scan, 1,000 mrem),

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31. NRC, Doses in Our Daily Lives, https://www.nrc.gov/about-nrc/radiation/around-us/doses-daily-lives.html (last visited July 24, 2018).

32. Natural Background Sources, *supra* note 29.

33. For example, the average annual dose from radon is 260 mrem for a person living in Virginia, but 610 mrem for someone living in Colorado. *See* S. Cohen & Assoc., (for EPA Office of Radiation and Indoor Air), ***Assessment of Variations in Radiation Exposure in the United States***, (July 15, 2005), p.4, ***available at*** https://www.orau.org/ptp/PTP%20Library/library/Subject/Environmental/radiationbackground.pdf.

34. *See* NRC, Sources of Radiation, https://www.nrc.gov/about-nrc/radiation/around-us/sources.html (last visited July 24, 2018).

35. *Id.*

accounting for about 48% of the average American's total annual exposure; consumer products (*e.g.*, televisions, computer screens) make up about 2 percent.[36]

And one's proximity to the source greatly affects the dosage. For example, the annual dose due to radon at 100 meters downwind of a uranium tailings pile that complies with the NRC regulatory standard has been projected as 140 mrem/year, at 2 kilometers away from the tailings pile it is 1.4 mrem/year,[37] or less than the radiation dose from a cross-countryc flight (3.5 mrem)[38].

Many studies have estimated that the health risks posed by low doses of radiation, such as those from mill tailings impoundments, are so low that they cannot be directly measured, even with studies looking at very large populations. For example, *Health Effects of Exposure to Low Levels of Ionizing Radiation*,[39] also known as the "BEIR V," found that a dose of 1 millirem results in a calculated increased risk of cancer of less than 1/1,000,000.[40]Even this may overestimate the actual cancer risk due to radiation at the very low doses

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36. *Id.*; *see also* Doses in Our Daily Lives, *supra* note 31.

37. Calculated from NRC, *Final Generic Environmental Impact Statement*, NUREG-0706 (Sept. 1980) ("Final GEIS"), p.329 Table 12.2. *See also infra* note 44.

38. Centers for Disease Control and Prevention, Radiation from Air Travel, https://www.cdc.gov/nceh/radiation/air_travel.html (last visited July 24, 2018).

39. National Research Council, The National Academies Press (1990)(cited in 1991 Final Rule, 56 Fed. Reg. at 23362-23363).

40. *Id.* p.172.

associated with uranium mill tailings, given that there is no evidence of direct human health effects below a dose of 10 millisieverts, or 1,000 millirem.[41] Although NRC follows very conservative international regulatory guidance out of an abundance of caution, there is in fact no direct evidence of a health risk from exposures at or below the low public and occupational standards established in Part 20.[42]

B. NRC's Licensing, Regulation, and Oversight of Uranium Milling and Mill Tailings Disposal Protects Workers, the Public, and the Environment from Potential Hazards

NRC licenses and regulates conventional uranium milling operations (such as the kind being proposed by Petitioners in this case), including tailings management, under 10 C.F.R. Part 40 ("Part 40"), "Domestic Licensing of Source Material," especially Appendix A to Part 40 ("Part 40 Appendix A"), *Criteria Relating to the Operation of Uranium Mills and the Disposition of Tailings or Wastes.* Appendix A's specific criteria ensure that UMTRCA's statutory mandates are met, and that uranium milling operation and tailings management complies with regulatory dose and effluent limits.

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41. United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR), Frequently Asked Questions, http://www.unscear.org/unscear/en/faq.html (last visited July 24, 2018).

42. *See* Nuclear Radiation Health Effects, *supra* note 30.

1. Licensing Criteria for Operation of Uranium Mills and Disposition of Tailings or Wastes

Part 40 Appendix A, developed with extensive public involvement[43], reflects NRC's conclusions regarding the best and most practical safety measures and technology to contain the hazards associated with milling and tailings management for the very long term at radiation levels similar to those found in the natural environment. It establishes "technical, financial, ownership, and long-term site surveillance criteria relating to the siting, operation, decontamination, decommissioning, and reclamation of mills and tailings or waste systems and sites at which such mills and systems are located"[44]

NRC amended Part 40 Appendix A in 1985, to incorporate EPA's groundwater protection standards contained in 40 C.F.R. Part 192, *Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings*, promulgated in 1983 pursuant to UMTRCA.[45]

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43. NRC received and considered approximately 1,500 substantive comments from private individuals, state and Federal agencies, uranium mining companies, trade associations, and public interest groups on proposed rule changes to implement UMTRCA's requirements and the related draft Generic Environmental Impact Statement (GEIS).

44. Uranium Mill Licensing Requirements (Final Rule), 45 Fed. Reg. 65521 (Oct. 3, 1980) (adopting Part 40 Appendix A). NRC's three-volume Final GEIS (*supra* note 37) reflects the data and analysis supporting the Part 40 Appendix A criteria.

45. Final Rule, 50 Fed. Reg. 41852 (Oct. 16, 1985).

i. Planning, Siting, and Design of Mill Tailings Impoundments

The primary consideration driving planning, siting, design, and construction of mill tailings retention is the prevention of contamination and environmental damage over the very long term. Successful site selection and design for uranium recovery retention systems requires a detailed assessment of local conditions, including climate, ground-water and surface-water hydrology, geology, and seismology, and their impacts.[46]

The goal is permanent isolation of tailings and associated contaminants by minimizing disturbance and dispersion by natural forces and to do so without the need for ongoing maintenance. To accomplish this, applicants must optimize (i) remoteness from populated areas, (ii) hydrologic and other natural conditions as they contribute to continued immobilization and isolation of contaminants from groundwater sources; and (iii) potential for minimizing erosion, disturbance, and dispersion by natural forces over the long term. Part 40 Appendix A, Criterion 1.

Because below-grade disposal reduces the risk of catastrophic collapse or breach, and eliminates or reduces to very low levels the effects of natural weathering and erosion which could disrupt the tailings isolation, it is the "prime option" for tailings disposal. *Id.*, Criterion 3.

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46. NRC, *Design, Construction, and Inspection of Embankment Retention Systems at Uranium Recovery Facilities*, Regulatory Guide 3.11 (Rev. 3, Nov. 2008), p.4.

ii. Durability and Effectiveness of Containment System

Tailings facilities must limit releases of radon to 20 picocuries per square meter per second (pCi/m^2s), and reduce direct gamma exposure from the tailings or wastes to natural background levels. Part 40 Appendix A, Criterion 6.

Because "[t]ailings impoundments constitute large, diffuse, and essentially permanent area sources,"[47] tailings disposal facilities must be designed to control radiological hazards for 1,000 years, to the extent reasonably achievable, and, in any case, for at least 200 years. Part 40 Appendix A, Criterion 6. To help applicants and licensees develop siting and design choices that will meet this requirement, NRC has issued guidance describing acceptable methods for calculating radon fluxes through earthen covers and the resulting minimum cover thickness needed to meet NRC's and EPA's standards.[48]

Part 40 Appendix A's siting and design criteria anticipate and mitigate erosion and other natural forces, including extreme weather or geological events, for the long term. For example, tailings impoundments must also withstand a maximum credible earthquake based upon an evaluation of earthquake potential considering the regional and local geology and seismology; below-grade disposal sites (*see* Criterion 4) will typically meet these

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47. Final GEIS p.21.

48. NRC, *Calculation of Radon Flux Attenuation by Earthen Uranium Mill Tailings Covers*, Regulatory Guide 3.64 (June 1989)

criteria.[49] Tailings impoundments must also "be designed very conservatively to avoid flood damage," in order to meet Criterion 6 durability requirements.[50]

While some have suggested that "tailings piles will eventually become uncovered and tailings widely dispersed," it is just as likely that "the erosion which might uncover tailings piles will eventually uncover natural ore bodies as well," and thus mining and milling of uranium has no significant net impacts over leaving the ore body in place.[51]

iii. Groundwater and Air Protection

Caps and liners enclosing the tailings storage cells reduce the risk of air or water-borne dispersion of radiological material to negligible levels, and methods such as dewatering tailings reduce seepage of toxic materials into groundwater to the maximum extent reasonably achievable. Any seepage which might occur must not result in the deterioration of the quality of existing affected groundwater.[52] Part 40 Appendix A, Criterion 5.

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49. *See also* Final GEIS, *supra* note 37, at p.287 ("For tailings buried below-grade, there should be no adverse effect ... the most likely result would be further settlement of the tailings and cover.").

50. *Id.* p.287; *see also* 50 Fed. Reg. at 41857.

51. Final GEIS, *supra* note 37, at p.23.

52. Criterion 5 also addresses restoration of groundwater contaminated by seepage of toxic materials from mill tailings sites. Criterion 13 lists constituents for which NRC must set standards for compliance, if the constituent is reasonably expected to be in

Milling operations must be conducted so that all airborne effluent releases are reduced to levels as low as is reasonably achievable, primarily by means of emission controls. *Id.*, Criterion 8. Strict emissions controls also avoid site contamination.[53] Uranium byproduct materials effluent levels must also be managed so as to conform to EPA regulations.[54] NRC guidance provides methods, models, data, and assumptions acceptable for estimating airborne emissions of radioactive and toxic materials from various steps in uranium milling, to assist applicants and licensees in preparing required environmental reports.[55]

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or derived from the byproduct material and has been detected in groundwater. These criteria incorporate EPA's basic groundwater protection standards in 40 C.F.R. § 192, subparts D & E.

53. NRC explains in *Minimization of Contamination and Radioactive Waste Generation: Life Cycle Planning*, Regulatory Guide 4.21 (June 2008), "how facility design and procedures for operation will minimize ... contamination of the facility and the environment, facilitate eventual decommissioning, and minimize ... the generation of radioactive waste." *See* 10 C.F.R. § 20.1406. This guidance was drawn from nuclear industry experience and lessons learned from decommissioning.

54. 40 C.F.R. Pt. 440, *Ore Mining and Dressing Point Source Category: Effluent Limitations Guidelines and New Source Performance Standards*, subpart C, *Uranium, Radium, and Vanadium Ores.*"

55. Regulatory Guide 3.59, *supra* note 22.

2. License Application Review and Renewal Process

An NRC source and byproduct material license is required to recover uranium from ore. 10 C.F.R. § 40.31. NRC performs a thorough, public review of all new license applications and license renewals. NRC bills applicants and licensees for costs associated with licensing and oversight. 10 C.F.R. § 170.31.[56]

New license applicants for a uranium milling facility operating license and renewing licensees "must clearly demonstrate how the requirements and objectives set forth in [A]ppendix A have been addressed," 10 C.F.R. § 40.31(h). Indeed, construction cannot begin until NRC confirms the applicant's proposed plans meet these requirements. *Id.* §§ 40.14, 40.32(e).[57]

Applicants address these criteria in a technical report submitted with their application. NRC also requires licensees to prepare an environmental report that serves as the basis for NRC's environmental assessment or Environmental Impact Statement ("EIS"). Applicants must also make financial assurances as to their ability to fund decontamination and decommissioning of the site, to surrender title to the land on which tailings impoundments are sited, and to fund long-term monitoring of tailings impoundments by the government. *See* Section II.B.4, *infra*.

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56. *See also* NRC, Cost Projections for Uranium Licensing Actions, https://www.nrc.gov/materials/uranium-recovery/cost-projections-license-apps.html (last visited July 20, 2018).

57. *See also* 45 Fed. Reg. at 65529.

NRC licensing proceedings are public; notices regarding license applications and renewals are published in the Federal Register, and license applications are made available online.[58] Public hearings may be held, and comments from the public regarding license applications and review are welcomed and considered. Any person whose interest may be affected by a proceeding and who desires to participate as a party may file a request for a hearing, or to intervene in an existing hearing. 10 C.F.R. § 2.309.

i. Technical Report Assessment

License applications include a detailed technical report addressing the effects of the proposed operations on public health and safety. For license renewals and amendments, the licensee must also address changes in proposed operations that NRC has not previously reviewed and operational history since its last license issuance.

The NRC's review determines whether the applicant's application complies with Part 40 Appendix A and other regulatory requirements. NRC reviews the applications according to a standard review plan to ensure consistency of review and acceptance criteria for the applicant's proposed activities; site characterization; design of the proposed facility; management plans and controls, staff qualifications, radiation safety training, security and

58. *See* NRC, License Applications for New Uranium Recovery Facilities, Expansions, Restarts, and Renewals, https://www.nrc.gov/materials/uranium-recovery/license-apps.html (last visited Jul. 24, 2018).

quality assurance; operational monitoring, radiation safety controls, reclamation and decommissioning plans, and accident management, including radiological accident procedures and training programs.[59]

ii. Environmental Assessment and NRC's Environmental Impact Statement

In carrying out the NRC's obligations under the National Environmental Policy Act, NRC requires applicant to include as part of its application a report addressing the environmental impact of the mill, adverse environmental effects that cannot be avoided should the mill be licensed, alternatives to the mill, and any irreversible and irretrievable commitments of resources involved. 10 C.F.R. § 51.45.[60]

The applicant must address ore-body locations, the anticipated quantity of ore to be mined and milled, mining methods, plans for overburden storage and disposal, milling processes, plans for tailings disposal and management, operating plans and schedules, expected longevity of the project, planned end use of the project areas, and surety arrangements for the eventual decommissioning of the mill and reclamation of the areas impacted. The applicant must also address the environmental effects of site preparation, mill construction and mine opening; the environmental effects of mill and mine operation, including radiological and chemical impacts on humans and radiological effects on the biosphere; effluent and

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59. NRC, *Standard Review Plan for Conventional Uranium Mill and Heap Leach Facilities* (NUREG-2126) (Nov. 2014).

60. *See also* NRC, *Preparation of Environmental Reports for Uranium Mills*, Regulatory Guide 3.8 (Rev. 2, Oct. 1982).

environmental monitoring; the environmental effects of accidents; and economic and social effects.

The environmental report must provide sufficient information to support NRC's development of the EIS required when issuing a license for uranium milling. *See* 10 C.F.R § 51.20(a)(8). NRC's review and development of the EIS follows *Review Guidance for Licensing Actions Associated with NMSS Programs* (NUREG-1748) (NRC, Aug. 2003), which dictates that the EIS include a description of the affected environment and the environmental impacts of issuing a license, including land use, water resources, ecology, cultural and historic resources and public and occupational health. The EIS must also address mitigation measures and environmental monitoring and include a cost benefit analysis.

Prior to granting a license, the NRC publishes a draft EIS for public comment, typically conducting a public meeting or meetings near the site of the proposed action. Comments are taken into account in preparing the Final EIS.

3. Oversight of Active Uranium Milling and Mill Tailings Facilities

i. Regulatory Guidance

The Commission issues Regulatory Guides, reports, issue summaries, and other communications providing applicants and licensees with detailed guidance on how best to achieve compliance with NRC's regulations, from the initial design and planning stages through decommissioning. Regulatory Guides are first published in draft form for public review and comment.

For uranium milling and mill tailings management, the NRC provides extensive guidance regarding the Part 20 and Part 40 criteria and other applicable regulatory requirements, several examples of which have been cited throughout this brief.[61]

ii. Routine Monitoring, Self-inspection, and Reporting Requirements

Licensees must monitor and record radiation and effluent levels throughout construction and operation of the mill to ensure compliance with applicable standards and regulations, evaluate performance of control systems and procedures, assess environmental impacts, and detect potential long-term effects. Comprehensive monitoring of milling operations begins at least one full year prior to any major site construction, at which time the licensee must conduct a preoperational monitoring program on the milling site and its environs. Part 40, Appendix A, Criterion 7. The licensee must also establish a detection monitoring program required for NRC to set site-specific groundwater protection standards. *Id.*, Criterion 7A.

Daily inspections of tailings or waste retention systems must be conducted and documented by a qualified engineer or scientist during the facility's operational phase. Any failures or concerning issues identified must be immediately reported to the regional NRC office. *Id.*, Criterion 8A.

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61. *See* NRC, Uranium Recovery Regulations, Guidance, and Communications, https://www.nrc.gov/materials/uranium-recovery/regs-guides-comm.html (last visited July 24, 2018).

NRC requires uranium recovery licensees to report semiannually on radioactive effluents, and to report any other information NRC needs to estimate potential radiation doses to the public. NRC may require licensees to take corrective actions based on these reports.

Escalated reporting is required for serious or significant accidents or contamination. 10 C.F.R. §§ 20.2202; 30.50. NRC operates a 24/7 emergency response center in order to rapidly evaluate and respond to abnormal conditions or accidents that occur at licensed nuclear facilities.

iii. Facilities Inspections

NRC inspectors observe licensed facilities first-hand to confirm radioactive materials are properly controlled, areas containing radiation or radioactive contamination are properly restricted, and radiological monitoring equipment is operational. Inspectors review the licensee's monitoring records to confirm that required monitoring is being conducted and recorded, and to note any overexposures or effluent releases in excess of regulatory thresholds. Inspectors also review records of any events involving contamination, releases, equipment malfunctions, or other similar events. They review training records to confirm employee training is being conducted in accordance with the licensee's commitments, and interview workers and managers to affirm that they understand and comply with radiological safety standards, and to hear any concerns they may have.

Inspectors issue reports addressing all concerns identified, and follow up to ensure that necessary

corrections are made. If necessary, NRC has the authority to suspend or revoke a license or to order temporary or permanent termination of operations. *See* 10 C.F.R. § 40.71.

iv. Corrective and Enforcement Actions

In addition to inspections conducted by technical trained inspectors, the NRC oversight process uses experienced investigators to evaluate allegations of willful misconduct.

If the results of NRC's oversight actions identify violations, NRC takes enforcement action in accordance with its Enforcement Policy such as issuance of notices of violations, civil penalties, orders suspending, modifying, or revoking licenses, and makes referrals to the Department of Justice for consideration of criminal prosecution.[62] The public may also petition the NRC to take enforcement action. 10 C.F.R. § 2.206. NRC notifies the public of all significant enforcement actions.[63]

Whether or not compliance issues are identified, pursuant to Sections 161 and 186 of the AEA, as amended, the Commission may issue orders requiring a licensee to

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62. *See* NRC, *Enforcement Policy* (May 15, 2018); *see also* NRC, Enforcement Guidance, https://www.nrc.gov/about-nrc/regulatory/enforcement/guidance.html (last visited July 24, 2018).

63. *See* NRC, Escalated Enforcement Actions Issued to Materials Licensees, https://www.nrc.gov/reading-rm/doc-collections/enforcement/actions/materials/ (last visited July 24, 2018) (listing. all significant enforcement actions that NRC has issued to materials licensees since 1996).

take action as may be necessary or desirable to protect the public health and safety. *See* 10 C.F.R. § 2.202(a)(1).

4. Decontamination, Decommissioning and Long-Term Site Surveillance

Each licensed mill operator must make sufficient financial surety arrangements before the commencement of operations to assure that funds will be available to carry out the eventual decontamination and decommissioning of the site and for the reclamation of any tailings or waste disposal areas. Part 40 Appendix A, Criterion 9. Owners must also yield title to the land used for the disposal of uranium mill tailings to the United States or the state in which the site is located, at the option of the state. *Id.*, Criterion 11. To cover the cost of long-term surveillance, each licensee must pay a fee substantial enough to yield interest in an amount sufficient to cover the annual costs of site surveillance. *Id.*, Criteria 10 & 12.

If all of the Part 40 Appendix A licensing requirements have been met, the final disposition of tailings should not require ongoing active maintenance to preserve isolation. The government agency responsible for long-term care of the disposal site will conduct annual inspections to confirm its integrity and to determine the need, if any, for maintenance and/or further monitoring. *See id.*, Criterion 12.

III. The NRC's Regulation and Oversight Program Prevents Contamination and Protects Public Health and the Environment

Although critics of the Coles Hill uranium recovery project proposed by Petitioners have raised the specter of problems and incidents that arose prior to the enactment of the UMTRCA at older mill tailings disposal sites in the Western U.S. and elsewhere, those problems arose precisely because mill tailings disposal was unregulated.[64]

In fact, these were the very problems UMTRCA and NRC's Part 40, Appendix A were specifically designed to address. A "worst case scenario" such as the 1979 Church Rock uranium mill tailings spill, in which an earthen dam built on geologically unsound ground failed, releasing over 1,000 tons of mill tailings and 93 million gallons of tailings solution[65] is no longer a realistic possibility under today's regulatory system. Indeed, because the Church Rock incident occurred during NRC's development of Part 40 Appendix A, it underscored for all stakeholders the urgency and importance of developing a regulatory framework that will ensure safe and effective mill tailings management for the very long term.[66]

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64. *See, e.g.*, J.A.154-55.

65. *See Mill Tailings Dam Break at Church Rock, New Mexico: Hearing Before the Subcomm. on Energy and the Environment, H. Comm. on Interior and Insular Affairs*, 96th Cong, 1st Sess. (October 22, 1979), p.19-24.

66. *Id.* at 171-198 (testimony of NRC Director of Nuclear Material Safety and Safeguards referencing 44 Fed. Reg. 50012-50025 (Aug. 24, 1979) (proposed rule)).

Today, nothing resembling the Church Rock spill is possible at an NRC-licensed mill site, because NRC's licensing and regulation of mill tailings disposal and management following Congress's passage of UMTRCA ensures the safe disposal and long-term storage of mill tailings and associated waste products. *See* Section II, *supra*. Church Rock and incidents like it have served as a lesson for NRC regulators on the potential costs of failing to ensure full compliance.[67]

NRC is also part of the international nuclear regulatory community, which has collectively developed effective practices and expertise in regulating uranium milling and tailings disposal over the past four decades. In a 2014 report, the Nuclear Energy Agency (NEA) of the Organization for Economic Co-Operation and Development (OECD), a cooperative international organization of which the United States is a member, "compar[ed] currently leading approaches" for the management of the environment and health impacts of uranium mining with "outdated practices."[68] The OECD report found that "[u]ranium mining and milling has evolved significantly over the years" and that the review

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67. *See, e.g.*, NRC, *Operational Inspection and Surveillance of Embankment Retention Systems for Uranium Mill Tailings*, Regulatory Guide 3.11.1 (Rev. 1, Oct. 1980), p.2 and Table 1 (listing tailing accidents from 1959 through 1979, noting while that modern geotechnical engineering and technology would prevent most such accidents, cautious and regular surveillance is also necessary to assure accident prevention).

68. OECD, National Energy Agency, *Managing Environmental and Health Impacts of Uranium Mining*, NEA-7602 (2014), available at http://www.oecd-nea.org/ndd/pubs/2014/7062-mehium.pdf.

of current practices "demonstrates how uranium mining can be conducted in a way that protects workers, the public and the environment." Today,

> [i]nnovative, modern mining practices combined with strictly-enforced regulatory standards [that] are geared towards avoiding past mistakes committed primarily during the early history of the industry when maximising uranium production was the principal operating consideration. Today's leading practices in uranium mining aim at producing uranium in an efficient and safe manner that limits environmental impacts to acceptable standards.[69]

While no industrial operation (and no human activity) is entirely without risk, uranium milling and tailings management, as currently regulated and practiced, is protective of the public health and safety and of the environment. It is reasonable to assume that the comprehensive and effective regulatory standards and practices developed by NRC and the international community will sufficiently manage the risks involved and protect the health and safety of Virginia's citizens and its environment, should Virginia's current moratorium be overturned.

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69. *Id.*

CONCLUSION

Radiological safety is NRC's regulatory mission and area of expertise, and *amici curiae*, based on their knowledge and experience of the effectiveness of NRC's comprehensive licensing and oversight program, have full confidence that the Virginia legislature's concerns regarding the radiological safety of mill tailings disposal are unfounded. *Amici* therefore respectfully request that the Court reverse the judgment of the Fourth Circuit.

Respectfully submitted,

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APPENDIX

APPENDIX — RELEVANT BACKGROUND AND EXPERIENCE OF *AMICI CURIAE*

L. Joseph Callan is a former NRC Executive Director for Operations. During his 19-year NRC career, Mr. Callan also served as Regional Administrator of NRC Region IV (Western United States), which provides regulatory oversight of most existing U.S. uranium mill and uranium mill tailings sites. He has a B.S. from the U.S. Naval Academy and undertook graduate studies in nuclear engineering at North Carolina State University.

Francis X. "Chip" Cameron is a former NRC Assistant General Counsel. During his 27-year career at NRC, Mr. Cameron also served as a Senior Attorney in the Office of the General Counsel, and as Deputy Director of the Office of the Licensing Support System. As Assistant General Counsel, Mr. Cameron advised NRC staff and the Commission on radioactive materials licensing issues, including the regulation of uranium mills and mill tailings, and the Agreement States program. Mr. Cameron has a B.A. and J.D. from University of Pittsburgh and a Masters of Natural Resources Management from University of Rhode Island.

Dr. Nils J. Diaz is a former NRC Commissioner and Chairman. He was appointed to the Commission in 1996 by President Bill Clinton, and by President George W. Bush to serve as Chairman of the Commission in 2003. During his two terms on the Commission, Dr. Diaz strongly promoted transparency for safety-significant issues, timelier decision-making, and a streamlined and effective regulatory processes. Prior to serving on the Commission,

Dr. Diaz was Professor of Nuclear Engineering Sciences at the University of Florida. Dr. Diaz holds a Ph.D. and M.S. in Nuclear Engineering Sciences from the University of Florida, and a B.S. in Mechanical Engineering from the University of Villanova, Havana. He has received formal training and practice in Nuclear Medicine and Health Physics and was licensed as a Senior Reactor Operator for 12 years by the NRC. He has published more than 70 refereed papers on national and international journals. He is a Fellow of the American Nuclear Society, the American Society of Mechanical Engineers and the American Association for the Advancement of Science.

John T. Greeves is a former Director of NRC's Division of Waste Management. During his 30-year NRC career, Mr. Greeves also served as Chief of the Uranium Recovery and Mill Tailings Branch and directed NRC's program for licensing, inspection, and regulation of the management, treatment, and commercial disposal of low-level nuclear waste, uranium recovery mill tailings sites remediation, and material facility and power reactor decommissioning. He also ensured that NRC developed consistent criteria for acceptable radioactive waste disposal, uranium recovery activities, and decommissioning. Mr. Greeves has a B.S. in Civil Engineering from University of Maryland.

Joseph R. Gray is a former NRC Associate General Counsel for Licensing and Regulation. During his 32-year NRC career, Mr. Gray managed the Office of General Counsel's Rulemaking and Fuel Cycle Division, responsible for the legal aspects of rulemaking and

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No. 16-1275

IN THE

Supreme Court of the United States

VIRGINIA URANIUM, INC., ET AL.,
Petitioners,

v.

JOHN WARREN, ET AL.,
Respondents.

On Writ of Certiorari to the United States Court of Appeals for the Fourth Circuit

BRIEF OF INDIANA, WASHINGTON, HAWAII, MARYLAND, MASSACHUSETTS, NEW JERSEY, OREGON, PENNSYLVANIA, RHODE ISLAND, AND TEXAS AS *AMICI CURIAE* IN SUPPORT OF RESPONDENTS

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QUESTION PRESENTED

Whether the Atomic Energy Act preempts Virginia's moratorium on conventional uranium mining, an activity all parties agree the Act gives the federal government no authority to regulate.

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INTEREST OF THE *AMICI* STATES

The States of Indiana, Washington, Hawaii, Maryland, Massachusetts, New Jersey, Oregon, Pennsylvania, Rhode Island, and Texas respectfully submit this brief as *amici curiae* in support of the respondent.

Relying on the savings clause of the Atomic Energy Act (AEA), 42 U.S.C. § 2021(k), petitioners ask the Court to establish a rule requiring courts to investigate the purpose of *any* state law that regulates *any* activity *even in the absence* of a "clear and manifest" congressional intent to preempt state regulation of that activity. *Wyeth v. Levine*, 555 U.S. 555, 565 (2009). Such a rule would transform the AEA's savings clause, which plainly was designed as a mechanism to *expand* States' regulatory authority, into one that greatly *diminishes* it. *See* Pet. Br. 26.

Petitioners' theory not only ignores the text of the AEA, but also contradicts this and lower courts' decisions interpreting the statute, which hold that preemption turns on "whether 'the matter on which the state asserts the right to act is in any way regulated by the federal government.'" *Pacific Gas and Electric Company v. State Energy Resources Conservation and Development Commission*, 461 U.S. 190, 212–13 (1983) (quoting *Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218, 236 (1947)).

In opposing petitioners' interpretive alchemy, the *amici* States have multiple interests at stake: (1) confining the scope of federal preemption to that intended by Congress; (2) safeguarding myriad state regulations—such as those related to hazardous waste—that could be jeopardized by petitioners' interpretation; and (3) limiting intrusive inquiries into lawmakers' subjective motivations.

SUMMARY OF THE ARGUMENT

I. Petitioners argue that the AEA preempts *any* state law that regulates for the purpose of protecting "against radiation hazards," regardless whether those laws regulate an activity over which the federal government has jurisdiction. Pet. Br. 31 (quoting 42 U.S.C. § 2021(k)). This theory is completely unsupported by the AEA's text. The AEA clearly provides that a party seeking preemption of a state law must first show that the law regulates an activity also regulated by the federal government. Only *then* does subsection 2021(k) come into play: 2021(k), the sole AEA provision referring to the "purposes" of state laws, will save such a state law if the law has a purpose "other than protection against radiation hazards." 42 U.S.C. § 2021(k).

II. The Court's precedents interpreting the AEA affirm the statute's plain meaning: The threshold requirement for preemption demands that the challenged state law regulate some activity also regulated by the federal government.

III. By dispensing with the threshold preemption requirement, petitioners' theory threatens numerous crucial state regulations, including regulations of hazardous waste.

IV. If the Court were to adopt petitioners' theory, *every* state law—no matter its age or subject matter—would be subjected to an intrusive inquiry into the motivations of its enactors. The Court should not impose such a burden on states in the absence of a clear statutory command. And whenever Congress requires such inquiries into legislative purpose, the Court should ensure that the judiciary treats them as questions of law, not questions of fact.

ARGUMENT

I. Petitioners' Theory Is Contradicted by the Text of the AEA

The Court's preemption doctrine is grounded in the Supremacy Clause, and "two cornerstones" gird its application. *Wyeth v. Levine*, 555 U.S. 555, 565 (2009); U.S. Const. art. VI, cl. 2. "First, 'the purpose of Congress is the ultimate touchstone in every preemption case.' " *Wyeth*, 555 U.S. at 565 (quoting *Medtronic, Inc. v. Lohr*, 518 U.S. 470, 485 (1996)). Second, courts must "'start with the assumption that the historic police powers of the states were not to be superseded by the Federal Act unless that was the clear and manifest purpose of Congress.' " *Wyeth*, 555 U.S. at 565 (quoting *Lohr*, 518 U.S. at 485).

"There is no federal pre-emption *in vacuo*, without a constitutional text or a federal statute to assert it," *Puerto Rico Dep't of Consumer Affairs v. Isla Petroleum Corp.*, 485 U.S. 495, 503 (1988), and congressional intent to preempt is therefore discerned from "the text and structure of the statute at issue," *CSX Transp., Inc. v. Easterwood*, 507 U.S. 658, 664 (1993) (*citing Shaw v. Delta Air Lines, Inc.*, 463 U.S. 85, 95 (1983)). Thus, to "wander far from the statutory text [is] inconsistent with the Constitution." *Wyeth*, 555 U.S. at 583 (Thomas, J., concurring in the judgment).

The AEA gives the federal government extensive authority to regulate activities related to nuclear energy, and state laws that purport to regulate these activities are generally preempted. But 2021(k)—which even the United States concedes is "framed as a 'savings clause,' " U.S. Cert. Br. 17–18—*saves* state laws that regulate an activity also regulated by the federal government so long as they have a non-radiation-hazard purpose.

Here, petitioners urge the Court to turn 2021(k) on its head: They would have the Court interpret the AEA to preempt *all* state laws enacted with the purpose of addressing concerns with "radiation hazards," *regardless of whether the activity the state seeks to regulate is also regulated by the federal government*. Pet. Br. 26. Such a test does not comport with the AEA's text.

A. No provision of the AEA authorizes petitioners' sweeping theory of preemption

Petitioners claim that the AEA preempts *all* state laws enacted with the purpose of addressing concerns with "radiation hazards" and maintain that states "may regulate *only* 'for *purposes* other than protection against radiation hazards.'" Pet. Br. 26 (quoting 42 U.S.C. § 2021(k)) (emphasis added). The United States would add a minor qualifier, that the AEA preempts a state law if its purpose is to address "radiation hazards *stemming from activities licensed under the statute*," U.S. Br. 12 (emphasis added). The United States' approach is utterly impracticable: It asks courts to determine not only whether a lawmaker was worried about hypothetical nuclear hazards, but also *which activities* generate those hypothetical nuclear hazards. More important, both theories are contradicted by the AEA's text.

Subsection 2021(k) is the only provision in the AEA that refers to the "purposes" of state law. Petitioners and the United States can either attempt to transform 2021(k) into an affirmative preemption clause or look for preemption elsewhere in the AEA. Both routes lead to absurdity.

1. Begin with the plain meaning of 2021(k). The provision reads in full: "*Nothing in this section shall be construed to affect the authority of any State or local agency to regulate activities* for purposes other than protection against radiation hazards." 42 U.S.C.

§ 2021(k) (emphasis added). It plainly limits how courts "construe[]" the other provisions of "this section": A state may regulate *notwithstanding* those other provisions so long as its reason for doing so is not "protection against radiation hazards." Thus, 2021(k)'s inquiry into the "purposes" of a state law applies only *after* the party challenging the state law makes the threshold showing that the state law regulates an activity the federal government regulates under the AEA.

Petitioners' arguments from canons of statutory interpretation do not undermine the straightforward meaning of the statutory text. Pet. Br. 33–34. Both the *expressio unius* and superfluity arguments are answered by other provisions of the AEA that could preempt some—but not all—state laws.

The *expressio unius* canon implies that *some* state regulations are permissible "only for purposes other than protection against radiation hazards." Pet. Br. 33 (internal citation and quotation marks omitted; emphasis removed). But the universe of state regulations to which this test applies includes only those regulations that otherwise fall within the scope of some *other* AEA provision. *See Pacific Gas*, 461 U.S. 190, 212–13 (internal quotation marks omitted) ("the test of preemption is whether the matter on which the state asserts the right to act is in any way regulated by the federal government.").

Consider, for example, the AEA's general prohibition against transferring or receiving "source material [e.g., uranium ore, 42 U.S.C. § 2014(z)] after removal from its place of deposit in nature." 42 U.S.C. § 2092. Under section 2092, no one may transfer or receive uranium ore without a license from the Nuclear Regulatory Commission. *Id.* The federal government thus regulates this activity. Yet states may, under 2021(k), regulate transfer of uranium ore in a way that does not conflict with federal regulation, so long as the purpose is *not* "protection against radiation hazards." 42 U.S.C. § 2021(k). And under subsection 2021(b), states may so regulate even for protection from radiation hazards if they secure an agreement from the Nuclear Regulatory Commission "discontinu[ing] its regulatory authority." *Id.* § 2021(b). The *expressio unius* canon supports the inference that these are the only ways states can regulate uranium ore transfer, but only because section 2092 regulates the transfer of uranium ore. Where, as here, a state's law does *not* regulate a matter also regulated by the federal government, 2021(b) and 2021(k) are irrelevant and petitioners' *expressio unius* argument has no application.

Similarly, petitioners' reliance on the canon against superfluity ignores that 2021(k) saves some state regulations that *are* preempted by other provisions of the AEA, such as section 2092. Far from "effectively excis[ing] Subsection (k) from the text," Pet. Br. 34, the plain-text meaning gives 2021(k) a crucial

role: It exempts state regulation of matters regulated by the federal government so long as their purpose is unrelated to concerns with radiation hazards.

The many decisions interpreting similar "nothing . . . shall be construed" provisions confirms that this one, like the others, is a savings clause. Courts routinely recognize that Congress uses this formulation to limit the effect—including the preemptive effect—of other provisions of a statute. *See, e.g., Kentucky Ass'n of Health Plans, Inc. v. Miller*, 538 U.S. 329, 333 (2003) (recognizing preemption "savings clause" in Employee Retirement Income Security Act); *Sec'y of the Interior v. California*, 464 U.S. 312, 341 n.21 (1984) (recognizing "savings clause" in Outer Continental Shelf Lands Act); *United States v. Menasche*, 348 U.S. 528, 529 (1955) (recognizing "savings clause" in Immigration and Nationality Act of 1952); *Merrick v. Diageo Americas Supply, Inc.*, 805 F.3d 685, 691 (6th Cir. 2015) (recognizing preemption savings clauses in Clear Air Act and Clean Water Act).

In sum, it is impossible to transmogrify 2021(k) into an affirmative preemption provision that invalidates all state laws adopted to address radiation hazards. Doing so requires considerable revisions, deleting the provision's first twelve words, changing the second "to" to "may," and adding an "only" after "activities":

> ~~Nothing in this section shall be construed to affect the authority of~~ any

> State or local agency ~~to~~ **may** regulate activities **only** for purposes other than protection against radiation hazards.

"[O]ur constitutional structure does not permit this Court to 'rewrite the statute that Congress has enacted.'" *Puerto Rico v. Franklin California Tax-Free Trust*, 136 S. Ct. 1938, 1949 (2016) (quoting *Dodd v. United States*, 545 U.S. 353, 359 (2005)). And in light of the frequency with which similar savings clauses limit preemption in other statutes, accepting this contortion would cast doubt on many state laws across many different policy areas. The Court should not do so here.

2. Because 2021(k) is a savings clause, the only way to reach petitioners' conclusion that "a State may regulate *only* 'for purposes other than protection against radiation hazards,' " Pet. Br. 33 (quoting 42 U.S.C. § 2021(k)), is to interpret the other provisions of the AEA to preempt *every* state law, only then to be saved by 2021(k), as limited by its purpose test. But to state this theory is to reject it: The AEA has never preempted all state laws in general, or even state regulation of uranium mining in particular.

No AEA provision explicitly displaces states' authority to regulate uranium mining, much less explicitly preempts all state laws. As the United States acknowledges, the AEA has no general "express-preemption provision." U.S. Cert. Br. 18. And it beggars belief to think that—without 2021(k) in place to

save laws with non-radiation-hazard purposes—earlier versions of the AEA preempted *all* state laws.

That leaves the 1959 Amendments that enacted 2021(k). And, other than a minor amendment to 42 U.S.C. § 2138, all of the 1959 Amendments are now codified at 42 U.S.C. § 2021. None of section 2021's subsections includes so much as a hint of congressional intent to preempt state regulation of uranium mining, much less an intent to preempt all state laws:

- (a) lists the statute's purposes;
- (b) authorizes the Commission to enter into agreements with states;
- (c) requires the Commission to retain authority over activities unrelated to uranium mining;
- (d) imposes requirements on Commission State agreements;
- (e) requires agreements to be published in the Federal Register;
- (f) authorizes the Commission to grant exemptions to licensing requirements and regulations;
- (g) directs the Commission to work with states in formulating standards;
- (h) directs the EPA to consult with experts regarding radiation matters;
- (i) authorizes the Commission to provide training and inspection assistance to the states with which it has agreements;

- (j) authorizes the Commission to suspend agreements to protect health and safety;
- (k) is the savings clause;
- (l) permits states to participate in licensing determinations;
- (m) says agreements with states do not affect the Commission's authority to protect the common defense;
- (o) imposes requirements on states' regulation of byproduct material.

There is thus no trace of preemption in the 1959 Amendments, which is unsurprising, for "the point of the 1959 Amendments was to *heighten* the states' role." *Pacific Gas*, 461 U.S. at 209 (emphasis added).

Ultimately, no support for petitioners' preemption theory exists in the text or structure of the AEA. The AEA does not preempt state regulation of uranium mining, and 2021(k)'s purpose test is therefore irrelevant. Petitioners' challenge to Virginia's uranium-mining moratorium should end there.

B. The presumption against preemption requires any doubts to be resolved in favor of state law

The text and structure of the AEA leave no doubt that 2021(k) is a savings clause, not an affirmative preemption clause. But even if there were doubt, the Court's precedents require resolving it in favor of Virginia's uranium-mining moratorium.

First, petitioners argue that the AEA preempts an extremely broad field of state regulation: all state laws with the purpose of addressing radiation hazards. Pet. Br. 26. But 2021(k), the AEA's savings clause, creates a presumption that the AEA does *not* preempt the field. Federal courts have regularly observed that the "existence of [a] preemption savings clause indicates that Congress did not intend to preempt the field." *Time Warner Cable v. Doyle*, 66 F.3d 867, 878 n.12 (7th Cir. 1995); *see also Johnson v. Am. Towers, LLC*, 781 F.3d 693, 703 (4th Cir. 2015) ("The savings clause demonstrates that congressional intent to completely preempt this area of law is neither clear nor manifest."). Subsection 2021(k) therefore creates a presumption against broad field preemption that neither petitioners nor the United States have overcome.

Second, and more fundamentally, the Court has said many times that it utilizes a presumption against preemption "[i]n all pre-emption cases, and particularly in those in which Congress has legislated . . . in a field which the States have traditionally occupied." *Wyeth*, 555 U.S. at 565 (quoting *Medtronic, Inc. v. Lohr*, 518 U.S. 470, 485 (1996) (alteration and ellipsis in original). In other words, the Court assumes "that the historic police powers of the States were not to be superseded by the Federal Act unless that was the clear and manifest purpose of Congress." *Id.* (quoting *Medtronic*, 518 U.S. at 485); *see also Arizona v. United States*, 567 U.S. 387, 400 (2012). "Thus,

when the text of a pre-emption clause is susceptible of more than one plausible reading, courts ordinarily 'accept the reading that disfavors pre-emption.'" *Altria Grp., Inc. v. Good*, 555 U.S. 70, 77 (2008) (quoting *Bates v. Dow Agrosciences LLC*, 544 U.S. 431, 449 (2005)). This presumption applies equally where, as here, the question is "the *scope* of [Congress's] intended invalidation of state law." *Medtronic*, 518 U.S. at 485.

The presumption against preemption has "particular[]" force here because the States have "traditionally occupied" the arena of land-use regulation generally and mining regulation specifically. *Wyeth*, 555 U.S. at 565. Virginia's uranium-mining moratorium is effectively a regulation of the use of land in Virginia, and the Court has long recognized that "[r]egulation of land use . . . is a quintessential state and local power." *Rapanos v. United States*, 547 U.S. 715, 738 (2006). And even with respect to mining specifically, Congress has recognized that "because of the diversity in terrain, climate, biologic, chemical, and other physical conditions in areas subject to mining operations, the primary governmental responsibility for developing, authorizing, issuing, and enforcing regulations for surface mining . . . should rest with the States." 30 U.S.C. § 1201(f). To this day the federal government still does not regulate uranium mining. *See* Pet. Br. 45; U.S. Br. 14. It can hardly be said, therefore, that the AEA displaces states' traditional regulatory authority.

Neither petitioners nor the United States has articulated preemption theories consistent with the text of the AEA. And they certainly have not shown that the AEA evinces a "clear and manifest purpose of Congress" to preempt every state law adopted with the purpose they claim is forbidden. *Wyeth*, 555 U.S. at 565. Accordingly, no basis exists for declaring Virginia's uranium-mining moratorium to be preempted.

II. Petitioners' Theory Misreads the Cases Interpreting the AEA

A. This and lower courts have recognized AEA preemption only of state laws that regulate an activity also regulated by the federal government

The decisions interpreting the AEA affirm the straightforward interpretation articulated above: A state law is field-preempted by the AEA if the state law regulates an activity regulated by the federal government under the AEA, and, so long as the law does not directly conflict with federal law, subsection 2021(k) will *save* a state law from preemption if it has a purpose "other than protection against radiation hazards." 42 U.S.C. § 2021(k).

1. The Court announced this test in its first case addressing preemption under the AEA, *Pacific Gas and Electric Company v. State Energy Resources Conservation and Development Commission*, 461 U.S. 190 (1983). There, it held that "the test of preemption is

whether 'the matter on which the state asserts the right to act is in any way regulated by the federal government.' " *Id.* at 212–13 (quoting *Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218, 236 (1947)).

The United States disputes that *Pacific Gas* required the party favoring preemption to show that the activity at issue is "regulated by the federal government." *Id.* In support of this position it argues that the challenged law "barr[ed] construction of nuclear power plants [and] did not directly regulate a subject committed to [the Nuclear Regulatory Commission's] regulatory authority[.]" U.S. Br. 25 (internal emphasis omitted). This is incorrect. The Nuclear Regulatory Commission regulates the construction of power plants, *see* 42 U.S.C. § 2235, and *Pacific Gas* observed that the Nuclear Regulatory Commission specifically determined "that nuclear construction may proceed notwithstanding extant uncertainties as to waste disposal," *Pacific Gas*, 461 U.S. at 213. Indeed, only *after* reaching this conclusion did the Court deem it "necessary to determine whether there [wa]s a non-safety rationale for" the law. *Id.*

The Court applied this holding in *Silkwood v. Kerr-McGee Corporation*, 464 U.S. 238 (1984), where it addressed the AEA's possible preemption of state tort remedies for radiation injuries. The Court acknowledged that "[i]f there were nothing more . . . [than the AEA's] foreclosure of the states from conditioning the operation of nuclear plants on compliance

with state-imposed safety standards," these state tort remedies arguably would fall within the preempted field. *Id.* at 250–51. But there *was* more. The AEA's text—in particular "Congress' failure to provide any federal remedy for persons injured by such conduct"—and the history of other congressional actions in the nuclear energy sphere—provided "ample evidence that Congress had no intention of forbidding the states from providing" such remedies. *Id.* at 250–51. The federal government, therefore, had not "so completely occupied the field of safety that state remedies are foreclosed . . . ." *Id.* at 256.

The Court reaffirmed this test and further narrowed "the preempted field of nuclear safety as that field has been defined in prior cases" in *English v. General Electric Company*, 496 U.S. 72, 90 (U.S. 1990), a preemption challenge to state intentional infliction of emotional distress claims arising from violations of AEA whistleblower provisions, *id.* at 78. The Court found "no evidence of the necessary 'clear and manifest' intent on the part of Congress" to preempt those tort claims. *Id.* at 83.

2. Consistent with *Pacific Gas*, *Silkwood*, and *English*, the Circuits are united in requiring, as a threshold inquiry, that state laws challenged under the AEA touch on some activity "in any way regulated by the federal government." *Pacific Gas*, 461 U.S. at 212–13.

In *Skull Valley Band of Goshute Indians v. Nielson*, the Tenth Circuit recognized that "[i]n each instance, the question of preemption is one of determining Congressional intent." 376 F.3d 1223, 1240 (10th Cir. 2004) (citing *Wardair Canada Inc. v. Fla. Dep't of Revenue*, 477 U.S. 1, 6 (1986)). Discerning such intent from the AEA and the Nuclear Waste Policy Act, the Tenth Circuit concluded that spent nuclear fuel storage is an activity regulated by the federal government. *Id.* at 1242. Utah's challenged laws, ostensibly enacted to regulate matters traditionally within state control (e.g., licensing, county planning, and roads), were preempted because they "address matters of radiological safety *that are addressed by federal law* and that are the *exclusive* province of the federal government." *Id.* at 1246 (emphasis added).

The Second Circuit in *Entergy Nuclear Vermont Yankee LLC v. Shumlin*, 733 F.3d 393, 408–09 (2d Cir. 2013), likewise recognized that its "'task is to ascertain Congress' intent in enacting the federal statute at issue.'" (quoting *Shaw v. Delta Air Lines Inc.*, 463 U.S. 85, 95 (1983)). Assured that the challenged Vermont laws addressed matters regulated by the federal government—nuclear waste storage, plant operation, and state inspections at the Vermont Yankee nuclear power plant—the Second Circuit held that the laws were preempted because Vermont lacked a "non-safety rationale" in enacting them. *Id.* at 415 (quoting *Pacific Gas*, 461 U.S. at 213)).

3. Each of the decisions cited by petitioners and *amici* also required the challenged state laws to touch on some matter regulated by the federal government. *United States v. Manning*, 527 F.3d 828, 838 (9th Cir. 2008) and *United States v. Kentucky*, 252 F.3d 816, 823 (6th Cir. 2001) (concerning materials regulated by the AEA); *Me. Yankee Atomic Power Co. v. Me. Pub. Util. Comm'n*, 581 A.2d 799, 803 (Me. 1990) (concerning nuclear power plant decommissioning); *Long Island Lighting Co. v. Suffolk Cty., N.Y.*, 628 F. Supp. 654, 664 (E.D.N.Y. 1986) (concerning nuclear emergency response testing); *Suffolk Cty. v. Long Island Lighting Co.*, 728 F.2d 52, 57-58 (2d Cir. 1984) (concerning design, construction, and operation of a nuclear power plant); *Conn. Yankee Atomic Power Co. v. Town of Haddam Planning & Zoning Comm'n*, 19 Fed. App'x 21, 22 (2d Cir. 2001) (concerning a nuclear waste storage facility); *Me. Yankee Atomic Power Co. v. Bonsey*, 107 F. Supp. 2d 47, 53 (D. Me. 2000) (concerning the storage of spent nuclear fuel).

The cases cited by petitioners and *amici* outside the AEA context likewise require a showing of specific congressional intent to preempt state law. *Wyeth*, 555 U.S. at 565. *See, e.g., AT&T Mobility LLC v. Concepcion*, 563 U.S. 333, 344 (2011) (Federal Arbitration Act, enacted "to ensure the enforcement of arbitration agreements according to their terms so as to facilitate streamlined proceedings," preempted California's judicial rule "[r]equiring the availability of classwide arbitration"); *Oneok Inc. v. Learjet Inc.*, 135 S. Ct. 1591,

1599 (2015) (where "the Natural Gas Act was drawn with meticulous regard for the continued exercise of state power," state antitrust claims against natural gas traders are not preempted); *Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293, 308–09 (1988) (preempting "a state law whose central purpose is to regulate maters that Congress intended FERC to regulate"); *Howlett v. Rose*, 496 U.S. 356, 383 (1990) (preempting school officials' state sovereign immunity defense because "as to persons that Congress subjected to liability, individual States may not exempt such persons from federal liability by relying on their own common-law heritage"); *Allis-Chalmers Corp. v. Lueck*, 471 U.S. 202, 219 (1985) (preempting state tort claim because "Congress intended [Labor Management Relations Act] § 301 to pre-empt this kind of derivative tort claim").

B. Because the federal government does not regulate conventional uranium mining, Virginia's moratorium is not preempted

The Atomic Energy Act of 1946 gave the federal government a monopoly on the generation of nuclear power, and, like the current AEA, required a license to "transfer . . . source material," but limited the licensure requirement to activity taken only "*after* [source material's] removal from its place of deposit in nature." The Atomic Energy Act of 1946, Pub. L. No. 79-585 § 5(b)(2), 60 Stat. 761 (1946) (emphasis added). The subsequent statute, the Atomic Energy Act of

1954, withdrew the federal government's monopoly on nuclear power, but still required a license to "transfer . . . any source material," again applying that requirement only "*after* [source material's] removal from its place of deposit in nature." The Atomic Energy Act of 1954, Pub. L. No. 83-703 § 62, 68 Stat. 932 (1954) (emphasis added). This limitation on the federal government's jurisdiction continues to this day. *See* 42 U.S.C. § 2092.

Indeed, as petitioners and supporting *amici* concede, uranium mining is an activity necessarily preceding uranium's "removal from its place of deposit in nature," and therefore no AEA provision explicitly displaces state authority to regulate uranium mining. *See* Pet. Br. 45 ("[T]he mining of uranium [is] an activity beyond the [Nuclear Regulatory Commission's] jurisdiction."); U.S. Br. 14 (acknowledging "uranium mining . . . is outside the [Nuclear Regulatory Commission's] jurisdiction").

Because the federal government does not regulate conventional uranium mining, the Fourth Circuit correctly held that petitioners' challenge to Virginia's uranium mining moratorium must end there. *Va. Uranium*, 848 F.3d at 599.

III. Petitioners' Theory Could Jeopardize State Laws Congress Has Expressly Authorized

Accepting petitioners' preemption theory and discarding the threshold requirement of common-activity regulation would do more than produce the wrong result here; it could jeopardize other important state laws, including those Congress has expressly authorized states to adopt.

Again, petitioners argue that AEA preemption turns entirely on the purpose of a state law, regardless whether "the matter on which the state asserts the right to act is in any way regulated by the federal government." *Pacific Gas*, 461 U.S. at 212–13. Such an expansive, non-textual theory of AEA preemption would jeopardize, for example, state hazardous waste laws authorized by the Resource Conservation and Recovery Act (RCRA), which establishes "cradle to grave" regulation of hazardous waste. *See generally* 42 U.S.C. §§ 6901–6992(k); § 6926(b). Forty-eight states administer RCRA-authorized hazardous waste programs in lieu of RCRA. *See e.g.*, Ala. Code ch. 22-30; Ariz. Rev. Stat. tit. 49, ch. 5; Ark. Code Ann. §§ 8-7-201, *et seq.*; Cal. Health and Safety Code div. 20, ch. 6.5; Colo. Rev. Stat. ch. 25-15; Ind. Code § 13-22-2-1; Idaho Code ch. 39-4401; Ky. Rev. Stat. ch. 224.46; Nev. Rev. Stat. §§ 459.400, *et seq.*; Ohio Rev. Code ch. 3734; Or. Rev. Stat. chs. 465, 466; Wash. Rev. Code ch. 70.105.)

Such programs require "facilities" that treat, store, or dispose of hazardous waste to obtain permits. 42 U.S.C. § 6925(a). A facility's permit defines prescriptive engineering and operating standards and includes facility-specific terms and conditions the "State Director determines necessary to protect human health and the environment." 40 C.F.R. § 270.32(b)(2). Facility permits also provide standards for the "closure" of the facility and require "corrective action" (cleanup) for any releases during the facility's life. *See* 40 C.F.R. § 264.111.

These requirements apply with equal force if a facility manages hazardous waste that contains AEA material. Although RCRA's definition of "solid waste" specifically excludes AEA material, *see* 42 U.S.C. § 6903(27), when non-radioactive hazardous waste blends with AEA material, the resulting "mixed waste" *is* subject to RCRA by virtue of RCRA's application to the "hazardous" component of the waste. *See, e.g.*, EPA Notice: State Authorization to Regulate the Hazardous Components of Radioactive Mixed Wastes Under the Resource Conservation and Recovery Act, 51 Fed. Reg. 24,504 (July 3, 1986); DOE Final Rule: Radioactive Waste; Byproduct Material, 52 Fed. Reg. 15,937 (May 1, 1987); EPA Clarification Notice: Clarification of Interim Status Qualification Requirements for the Hazardous Components of Radioactive Mixed Waste, 53 Fed. Reg. 37,045 (Sept. 23, 1988). In fact, EPA will authorize a state hazardous waste program only if the state has authority to "regulate the

hazardous components of radioactive mixed wastes." 51 Fed. Reg. at 24,504 (internal citations and quotation marks omitted).

Because of the commingled nature of mixed waste, regulation of the RCRA portion necessarily has an incidental effect on the waste that would otherwise be regulated by the AEA. Regulations concerning the closure of tanks, for instance, require adherence to performance standards for waste removal and decontamination. *See* 40 C.F.R. § 264.111, –.197. Similarly, hazardous waste that is "land disposal restricted" must be treated to specific standards before disposal. *See, e.g.*, 40 C.F.R. § 268.40 (treatment standard for "[r]adioactive high level wastes generated during the reprocessing of fuel rods" is "vitrification"). To the extent these standards apply to RCRA waste, AEA material unavoidably will be affected as well.

Congress has expressly ratified this incidental, but substantial, regulation. In 1992, Congress enacted the Federal Facility Compliance Act (FFCA) (Pub. L. No. 102-386, Title I, § 102(a), (b), 106 Stat. 1505, 1506 (Oct. 6, 1992)), which is codified in RCRA.

Courts have recognized that the preempted "field" under the AEA excludes states' regulation of the RCRA component of mixed waste. *See United States v. Kentucky*, 252 F.3d 816, 823 (6th Cir. 2001) (RCRA and the AEA provide the federal government "exclusive authority to regulate the radioactive component

of waste mixtures, whereas EPA—or states authorized by EPA under the RCRA—retain the authority to regulate the hazardous portion."); *United States v. Manning*, 527 F.3d 828, 833 (9th Cir. 2008); *Legal Envtl. Assistance Found. Inc. v. Hodel*, 586 F. Supp. 1163, 1167 (E.D. Tenn. 1984).

Under petitioners' preemption theory, all of these state hazardous waste laws could be challenged and—even though facially valid—subjected to examination for improper purpose at the mere suggestion of a state's underlying concern with "radiation hazards." Petitioners' test would also open the door to preemption defenses every time a state issues penalties pursuant to its RCRA-authorized laws to facilities that manage hazardous waste with an AEA material component.

Courts "should not become embroiled in attempting to ascertain" the "true motive" of a state. *Pacific Gas*, 461 U.S. 190, 216. But under petitioners' test, courts would be forced to conduct resource-intensive evidentiary hearings to determine whether a state had an improper intent each time a state's hazardous waste law is challenged. And if a challenger manages to show that a state did have radiation hazards in mind, its law would be preempted, despite Congress' intent to maintain the "dual regulatory scheme" for the regulation of mixed waste established by RCRA and the AEA. *United States v. Kentucky*, 252 F.3d at

823. A void would occur in an area Congress intended and expressly authorized the states to fill.

Similarly here, preemption of Virginia's uranium mining moratorium would create a regulatory void in an area traditionally reserved to the states and not otherwise regulated by the federal government. *See Va. Uranium*, 848 F.3d at 596. The Fourth Circuit correctly considered the threshold question whether uranium mining is regulated under the AEA. Concluding that uranium mining is not "in any way regulated by the federal government[,]" the Fourth Circuit properly ended its inquiry and upheld Virginia's ban. *Va. Uranium*, 848 F.3d at 596 (quoting *Pacific Gas*, 461 U.S. at 212–13) (internal citations omitted). This approach is consistent with the Court's precedents and should be affirmed.

IV. The Court Should Not Expand Inquiries into a State's Purpose

A. The Court should not impose an inquiry into a state's purpose unless Congress has expressly required it

In addition to the textual, doctrinal, and practical problems discussed above, petitioners summarily dismiss the extent of intrusion into states' sovereignty created by their interpretation of the AEA. The Court has adopted its "clear and manifest purpose" test "because the States are independent sovereigns in our

federal system," and preemption is "a serious intrusion into state sovereignty." *Medtronic, Inc. v. Lohr*, 518 U.S. 470, 485, 488 (1996). The degree of intrusion threatened by judicial inquiry into legislative purpose makes a presumption against petitioners' position—and a requirement of an express statement from Congress—doubly appropriate here.

Petitioners urge the Court to treat 2021(k)'s purpose test as if it encompasses *all* state laws. And they ask the Court to conduct this inquiry by looking past the text of Virginia's moratorium on uranium mining, which "*facially purport[s]* to regulate a matter outside the [Nuclear Regulatory Commission's] jurisdiction." Br. 40 (emphasis in original). Indeed, petitioners urge the Court to permit a *jury* to investigate the Virginia legislature's "true purpose." *Id.* at 41. Construing the AEA this way would greatly expand "judicial inquiries into legislative or executive motivation," and these inquires "represent a *substantial intrusion* into the workings of other branches of government." *Vill. of Arlington Heights v. Metro. Hous. Dev. Corp.*, 429 U.S. 252, 268 n.18 (1977) (emphasis added).

A straightforward—and correct—interpretation of subsection 2021(k) confines such inter-branch intrusion to a small set of laws, and only when a state chooses to try to save a law that regulates an activity also regulated by the federal government under the AEA. Petitioners' interpretation, on the other hand, imposes intrusive judicial inquiries into the "actual"

purpose behind numerous state laws. Indeed, if the facial subject matter of a state law cannot save it from preemption, then literally *any* state law could be challenged in search of an improper purpose lurking somewhere in the mind of a key legislator or regulator.

The Court should never presume that Congress has authorized an expansive intrusion into the actual motivations of state officials. Whether in the preemption context or any other, before imposing on states a judicial inquiry into actual purpose, the Court should require, at the very least, a "clear and manifest" statement of Congress's intent that it do so. *Medtronic*, 518 U.S. at 485. And because the AEA's text does not even suggest such an intent—much less explicitly articulate it—petitioners' interpretation of the AEA should be rejected.

B. Questions of state purpose should be treated as questions of law, not fact

The intrusiveness of petitioners' preemption theory is exacerbated by their unsupported assumption that an inquiry into the "purposes" of a state regulation under subsection 2021(k) should be treated as a question of fact. In attempting to demonstrate the purpose of Virginia's uranium mining moratorium, petitioners cite statements made in 1984, after the moratorium had been adopted, by members of a study group who opposed lifting the moratorium, *see* Pet.

Br. 17–18, and statements made in 2013 by state legislators who voted to retain the moratorium, *id.* at 18–19. These statements, of course, are relevant only if the purpose of Virginia's moratorium is a factual question—although even then it is not clear why the statements are probative, for none were made by the legislators who actually enacted the challenged law.

Petitioners are wrong to treat the question of the moratorium's purpose as a factual one. That approach is inconsistent with how federal courts approach preemption questions, and it creates serious practical problems.

In *Pacific Gas*, the Court specifically refused to "become embroiled in attempting to ascertain California's true motive." *Pacific Gas*, 461 U.S. at 216. And federal courts have consistently dismissed requests to peer into lawmakers' inner motivations in other preemption contexts as well. *See, e.g., Bldg. Indus. Elec. Contractors Ass'n v. City of New York*, 678 F.3d 184, 191 (2d Cir. 2012) ("[W]hen a court assesses whether a governmental policy has a regulatory purpose, it looks primarily to the objective purpose clear on the face of the enactment, not to allegations about individual officials' motivations in adopting the policy."); *N. Ill. Chapter of Associated Builders & Contractors, Inc. v. Lavin*, 431 F.3d 1004, 1007 (7th Cir. 2005) ("Federal preemption doctrine evaluates what legislation does, not why legislators voted for it or what political coalition led to its enactment."); *Colfax*

Corp. v. Illinois State Toll Highway Auth., 79 F.3d 631, 635 (7th Cir. 1996) (refusing to "go behind the contract to determine whether [a state highway authority's] real, but secret, motive was to regulate labor").

As the Court observed in *Pacific Gas*, courts treat legislative purpose as a question of law because an "inquiry into legislative motive is often an unsatisfactory venture." 461 U.S. at 216. Such inquiries are difficult because, as the Court has pointed out "on so many prior occasions[,] . . . it is often 'difficult or impossible for any court to determine the 'sole' or 'dominant' motivation behind the choices of a group of legislators.'" *Bush v. Vera*, 517 U.S. 952, 1014 n.9 (1996) (Stevens, J., dissenting) (quoting *Palmer v. Thompson*, 403 U.S. 217, 225 (1971)); *see also United States v. O'Brien*, 391 U.S. 367, 384 (1968) (observing that these inquiries "are a hazardous matter" because "[w]hat motivates one legislator to make a speech about a statute is not necessarily what motivates scores of others to enact it").

With statutory interpretation, courts may *occasionally* struggle to determine which of two mutually contradictory meanings a legislature intended; but with investigating a law's purpose, they nearly *always* find it impossible to determine with any confidence whether a statute was borne of a forbidden motive. A legislator "can quite consistently intend" to ad-

vance multiple purposes, including a forbidden purpose, "and evidence of a sort available only to the Almighty would be needed to sort them out or to assign them relative weights." John Hart Ely, *Legislative and Administrative Motivation in Constitutional Law*, 79 Yale L.J. 1205, 1214 (1970).

Focusing on the factual question of the legislature's "true" purpose also creates the possibility of differential treatment of identical laws: "[O]ne State's statute could survive pre-emption . . . while another State's identical law would not, merely because its authors had different aspirations," or perhaps simply because of a lack of evidence. *Shady Grove Orthopedic Assocs., P.A. v. Allstate Ins. Co.*, 559 U.S. 393, 404 (2010). This problem can arise even in the context of a single legislature, for a state law could be invalidated and then "reenacted in its exact form if the same or another legislator made a 'wiser' speech about it." *O'Brien*, 391 U.S. at 384. In addition to its impracticality, such differential treatment seriously undermines the "'fundamental principle of equal sovereignty' among the States." *Shelby Cty., Ala. v. Holder*, 570 U.S. 529, 544 (2013) (quoting *Nw. Austin Mun. Util. Dist. No. One v. Holder*, 557 U.S. 193, 203 (2009)).

These problems are further intensified in the many states, including Indiana, that do not publish legislative debates. *See Shell Oil Co. v. Meyer*, 705 N.E.2d 962, 974 (Ind. 1998) ("Indiana publishes only

sparse legislative history."); *Millikan v. U.S. Fid. & Guar. Co.*, 619 N.E.2d 948, 951 (Ind. Ct. App. 1993) ("In states like Indiana that preserve no legislative debate and comment we must often speculate as to why particular provisions may have been enacted."). Without written documentation of legislative debates, determining precisely what motivated a legislature becomes nearly impossible, particularly where, as here, the law at issue was passed several decades earlier. The only remaining option is to obtain sworn testimony from long-since-retired state lawmakers, if they are even around. Requiring such absurd inquiries into the psyches of former state legislators is the logical consequence of petitioners' "actual motive" theory; one can scarcely imagine a starker intrusion into state sovereignty.

***

Petitioners urge the Court to ignore its precedents and transform AEA subsection 2021(k) from a savings clause into a provision authorizing preemption of *any* state law adopted to address radiation hazards. In doing so, petitioners run roughshod over the AEA's text, the cases interpreting it, the practical consequences of adopting their theory, and the presumptions the Court traditionally exercises in preemption and legislative-purpose cases. The Court should reject petitioners' request to revise the statute Congress has written.

CONCLUSION

For these reasons, the judgment of the Fourth Circuit Court of Appeals should be affirmed.

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No. 16-1275

In The Supreme Court of the United States

VIRGINIA URANIUM, INC., *et al*, *Petitioners*,

v.

JOHN WARREN, *et al.*, *Respondents*.

On Writ of Certiorari to the United States Court of Appeals for the Fourth Circuit

Brief *Amici Curiae* in Support of Respondents for the Members of the Southern Virginia Delegation to the Virginia General Assembly, Local Chambers of Commerce, Civic, Trade, and Economic Development Associations, and Municipalities

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STATEMENT OF INTEREST OF *AMICI*[1]

Together, the organizational *amici* represent business and community leaders throughout Southern Virginia with a long and demonstrated commitment to improving economic opportunities in the region. *Amici* have worked for decades to create jobs and ensure economic success, while preserving the high quality of life that citizens in the region have come to expect. They have developed an economic vision for the region that is premised on agriculture, tourism, motorsports, and the natural scenic beauty of Southern Virginia. Specifically, the chambers of commerce *amici* represent businesses in Pittsylvania County (where the Coles Hill Deposit is located) and in adjacent municipalities. These businesses have long expressed concerns about a large-scale mining project due to volatility in the global uranium market, which would threaten job creation and economic vitality for the region.

The elected official *amici* represent legislative districts in the Virginia General Assembly that cover Pittsylvania County where the Coles Hill Deposit is located, along with all or part of several adjacent cities and counties throughout Southern Virginia. Other jurisdictions within these legislative districts include all or part of the City of Danville and

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[1] The parties have filed letters with the Clerk indicating blanket consent to the filing of *amicus* briefs. No counsel for any party authored this brief in whole or in part, and no person or entity other than above-named *amici curiae* and their counsel made a monetary contribution intended to fund its preparation or submission.

Pittsylvania County, and three counties directly adjacent to Pittsylvania: Halifax, Henry, and Campbell Counties, as well as the City of Martinsville. All or part of several additional Counties are also within the legislative districts of *amici*: Amelia, Brunswick, Carroll, Charlotte, Dinwiddie, Franklin, Mecklenburg, Lunenburg, Prince Edward, Prince George, and Nottoway Counties, and the City of Galax.

A detailed description of all *amici curiae* is provided in the Appendix to this brief.

SUMMARY OF ARGUMENT

Members of the Virginia General Assembly, local Chambers of Commerce, and other civic associations included here as *amici* support the Commonwealth's moratorium on uranium mining largely because of concerns that the mining industry would threaten job security for the region. The economic concerns of *amici* serve legitimate State interests and are not preempted by the Atomic Energy Act.

The text of the Atomic Energy Act, 42 U.S.C. § 2011 *et seq.* ("AEA" or "the Act") explicitly leaves to the States the authority to regulate uranium "prior to removal from its place of deposit in nature." 42 U.S.C. § 2095 (2018). Thus, the question of how to regulate conventional uranium mining—or whether to ban it altogether—falls outside of the purview of the Nuclear Regulatory Commission ("NRC"). The NRC has historically recognized as much, declining to regulate "radioactive air emissions from debris left

over from unlicensed conventional mining activities" as lying "beyond the scope of the Atomic Energy Act." *In re: Hydro Res., Inc.*, 63 N.R.C. 510, 515 (2006).

Given the lack of NRC authority over conventional mining, Petitioners ask this Court to impose a remedy that would require the Commonwealth to develop its own uranium mining regulations. *See* Part I, *infra*. Yet it cannot be the case that federal courts would interpret the AEA to require state regulation of uranium mining when Congress itself could not impose that command on the States. "No matter how powerful the federal interest involved, the Constitution simply does not give Congress the authority to require the States to regulate." *New York v. United States*, 505 U.S. 144, 178 (1992).

What is more, concerns about conventional uranium mining *qua* mining supported Virginia's decision to adopt the moratorium in 1982, and to extend the moratorium indefinitely in 1983. *See* Part II, *infra*. The 1983 Virginia Acts of Assembly included language stating that the legislature, based on a preliminary study from the time period, had "not identified any environmental or public health concern that could preclude uranium development in Virginia." Act of Feb. 24, 1983, ch. 3, 1983 Va. Acts 3 (codified at VA. CODE ANN. § 45.1-283 (2018)). The 1983 legislative enactment also referenced "local concerns," "socioeconomic effects of the uranium development activity at the specific site," and the need for greater analysis of "the costs and benefits"

of allowing uranium mining in Southern Virginia. *Id.*; Pet'rs' App. 178a, 187a-88a.

The economic factors evident in 1983 remain in the market today. A report from the National Academy of Sciences ("NAS") indicates that uranium mining has historically been a boom-and-bust industry. *See* Part III, *infra*. Prices spiked in the 1970s, but suffered a steep and sustained decline throughout the 1980s and 1990s. For many years, the spot price for yellowcake remained at or below $20 per pound when adjusted for inflation. Today, spot prices remain near $25. These numbers are significant because Petitioner Virginia Energy Resources, Inc. has confirmed in filings with Canadian securities officials that the Coles Hill Deposit would be uneconomic to mine absent a far higher price for uranium. *See* Part III, *infra*. The data are especially concerning to *amici*, who are wary of volatility in the uranium mining industry, which could leave behind a shuttered mine and a weakened local economy.

Finally, local chambers of commerce and other economic development associations have relied on Petitioners' acquiescence to the legitimacy of Virginia's moratorium. *See* Part IV, *infra*. In columns published in regional newspapers, Petitioner Virginia Uranium, Inc. pledged that if "the NAS finds that uranium mining cannot be done safely, we will obviously not pursue lifting the

moratorium."[2] Petitioners relied on this pledge as they continued work to build a stable economy premised on agriculture, tourism, education, and other complimentary businesses. The doctrine of laches "may bar long-dormant claims for equitable relief." *City of Sherrill, N.Y. v. Oneida Indian Nation of New York*, 544 U.S. 197, 217 (2005). Given the reasonable likelihood of economic harm to *amici* if Virginia's moratorium were nullified, the laches doctrine is applicable here.

ARGUMENT

I. *Pacific Gas* and this Court's Preemption Jurisprudence Mandate Deference to Virginia's Exercise of its State Sovereignty.

The text of the AEA leaves to the States the question of how to regulate conventional uranium mining—or whether to ban it altogether. *See* 42 U.S.C. §2092 (2018) (granting NRC authority over "source material"[3] "after removal from its place of deposit in nature"); *see also* 42 U.S.C. § 2095 (2018) (declaring that reports on the "handling of source material" shall not be required by the NRC "prior to removal from its place of deposit in nature").

Faced with this statutory language, Petitioners premise their challenge to Virginia's moratorium on

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[2] Walter Coles, *Uranium Company Renews Pledge to Protect Virginians*, VIRGINIAN-PILOT, Mar. 27, 2011, at 8 (Hampton Roads Section).

[3] The Act defines "source material" to include uranium. 42 U.S.C. § 2014(z) (2018).

conventional uranium mining on a gross misreading of *Pacific Gas and Elec. Co. v. State Energy Res. Conservation and Dev. Comm'n*, 461 U.S. 190 (1983). Yet the *Pacific Gas* Court unanimously upheld the legitimacy of a California law that imposed a state moratorium on the construction of new nuclear power plants until the federal government had met its obligations under the AEA to ensure that "there exists a demonstrated technology or means for the disposal of high-level nuclear waste." 461 U.S. at 198.

In *Pacific Gas*, the Court delineated a line between federal and state authority with respect to nuclear power construction: "States retain their traditional responsibility in the field of regulating electrical utilities for determining questions of need, reliability, cost and other related state concerns." *Id.* at 205. In this context, "the test of preemption is whether 'the matter on which the state asserts the right to act is in any way regulated by the federal government.'" *Id.* at 213 (quoting *Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218, 230 (1947)). The Court only embarked upon the search for a "non-safety rationale" for California's law *after* determining that the plain text of the statute touched upon an area—namely, safety requirements for the disposal of high-level nuclear waste—that was explicitly within the authority of the NRC. Only after making this activity-based determination did the Court turn to, and accept, California's economic (*i.e.* non-safety) purpose in enacting the law. The *Pacific Gas* Court upheld California's law upon observing that "the

legal reality remains that Congress has left sufficient authority in the states to allow the development of nuclear power to be slowed *or even stopped* for economic reasons." *Id.* at 223 (emphasis added).

Here, Petitioners would have the Court proceed to the uncertain task of attempting to ascertain Virginia's legislative intent (for a statute enacted more than thirty-five years ago and in a State without any official legislative history [4]) before conducting the critical, activity-based inquiry that serves as the threshold in *Pacific Gas*.

Similar to the regulation of electric utilities, conventional mining is an activity that is "characteristically governed by the States." *Id.* at 205. Mining, like the provision of electricity, has "been regulated for many years, and in great detail by the States." *Id.* at 206. Both activities fall within the "historical police powers of the States" and cannot be superseded by the AEA unless that was the "clear and manifest purpose of Congress." *Id.* (quoting *Santa Fe Elevator Corp.*, 331 U.S. at 230).

Thus, there is no need to inquire into the Commonwealth's motives for enacting a moratorium on uranium mining during the 1982 and 1983 legislative sessions because Congress has left to the States the authority to regulate uranium "prior to

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[4] Virginia's Division of Legislative Services ("DLS") observes that "legislative intent is not officially recorded in Virginia." DLS, *Legislative Reference Center*, http://dls.virginia.gov/lrc/leghist.htm (last visited Aug. 29, 2018).

removal from its place of deposit in nature," 42 U.S.C. § 2095 (2018); Pet'rs' App. 111a. The text of the AEA explicitly places the activity regulated by Virginia's statute outside the purview of AEA, and the deference afforded the States in regulating the extraction of uranium from its place in nature has been acknowledged by the regulatory body tasked with implementing the Act. *See In re: Hydro Res., Inc.*, 63 N.R.C. 510, 512-13 (2006) (reading 42 U.S.C. 2092 as "precluding [NRC] jurisdiction over uranium mining.").

The NRC's analysis from *In re: Hydro* is instructive. There, the NRC explained that even "radioactive residue from previous mining activity amounts to 'background radiation' and does not count toward" the dosage limit for setting an NRC permit. *Id.* at 512. The NRC explained: "Conventional mining is controlled by other regulatory authorities. The State of New Mexico, for example, regulates conventional uranium mining within the state. . . . Pursuant to this authority, New Mexico has enforced cleanup orders . . . with respect to its uranium mining activities within the state." *Id.* at 513. Challengers to the NRC-issued permit had argued that high levels of gamma radiation from prior mining activities should be accounted for in setting new federal permit limits. *Id.* at 514. The NRC, however, had no power to broaden the AEA to reach these radiological safety concerns and instead held as follows:

> Were the NRC to expand the definition of TEDE [total effective dose

> equivalent] to include radioactive air emissions from debris left over from unlicensed conventional mining activities, the agency, in effect, would be entering an area of regulation that it has historically considered beyond the scope of the Atomic Energy Act. This we decline to do.

Id. at 515.

Congress, of course, could have mandated that the NRC directly regulate conventional uranium mining on private land, which might have preempted state-specific bans covering that activity. *See, e.g., Hodel v. Va. Surface Min. and Reclamation Ass'n, Inc.*, 452 U.S. 264, 288 (1981) (upholding the Surface Mining Control and Reclamation Act of 1977, Pub. L. No. 95-87, 91 Stat. 447 (codified at 30 U.S.C. § 1201 *et seq.* (2018)), where "the full regulatory burden will be borne by the Federal Government" if a State chooses not to regulate). But the AEA, as enacted, cannot possibly be read to prohibit Virginia's moratorium precisely because there is no federal regulation of conventional uranium mining under the Act.

Accordingly, Petitioners' reading of the Act would obligate the Commonwealth to develop a program for conventional uranium mining in violation of this Court's anti-commandeering decisions. *See, e.g., New York v. United States*, 505 U.S. 144, 166 (1992) ("We have always understood that even where Congress has the authority under the Constitution

to pass laws requiring or prohibiting certain acts, it lacks the power directly to compel the States to require or prohibit those acts."); *Printz v. United States*, 521 U.S. 898, 935 (1997) (finding that a command for state law enforcement officers to administer or enforce a federal regulatory regime is "fundamentally incompatible with our constitutional system of dual sovereignty"); *Murphy v. Nat'l Collegiate Athletic Ass'n*, 138 S.Ct. 1461, 1475 (2018) (the anti-commandeering doctrine "withhold[s] from Congress the power to issue orders directly to the States").

In *New York*, the Court examined a federal law that required States to either "take title" to low-level radioactive waste or to subsidize its transfer. In striking down the law, the Court articulated a notion of federalism-respecting preemption whereby "Congress encourages state regulation rather than compelling it [because] state governments remain responsive to local electorate's preferences [and] state officials remain accountable to the people." *Id.* at 168. When Congress compels states to regulate, on the other hand, "the accountability of both state and federal officials is diminished." *Id.* The Court thus concluded as follows:

> No matter how powerful the federal interest involved, *the Constitution simply does not give Congress the authority to require States to regulate.* The Constitution instead gives Congress the authority to regulate matters directly and to pre-empt

> contrary state regulation. Where a federal interest is sufficiently strong to cause Congress to legislate, it must do so directly; it may not conscript state governments as its agents.

Id. at 178 (emphasis added).

Similarly, while Congress could directly regulate uranium mining, it cannot constitutionally adopt legislation that expressly requires States to develop their own uranium mining regulations. Under Petitioners' theory of the case, however, the Court would interpret the AEA to do just that. If the moratorium were to be preempted, the Commonwealth would be forced to regulate. This interpretation cannot possibly stand as a permissible application of the Court's preemption doctrine. It cannot be that federal courts would interpret the AEA to require state regulation of uranium mining when Congress could not place that command in the text of the statute.

In sum, Congress chose not to regulate "any source material prior to removal from its place of deposit in nature," 42 U.S.C. § 2095 (2018), instead leaving the States' authority over conventional mining undisturbed. Exercising that authority, Virginia imposed a moratorium on uranium mining beginning in 1982, and in the intervening years, communities in Southern Virginia developed other industries that would now conflict with Petitioners' proposed uranium mining project.

II. Concerns about Conventional Uranium Mining *Qua* Mining Support Virginia's Decision to Enact Va. Code § 45.1-283.

From the time of its original enactment in 1982, Virginia's moratorium on uranium mining was premised in substantial part on the adverse impacts that might be anticipated from mining *qua* mining. *See* Act of Apr. 7, 1982, ch. 269, 1982 Va. Acts 269 (codified as amended at VA. CODE ANN. § 45.1-283 (2018)) ("the Virginia Act"). The Virginia Act went on to confirm that "uranium mining shall be deemed to have a significant effect on the surface," with a cross reference to VA. CODE ANN. § 45.1-180(a) (2018), part of the State's mining law dating back at least to 1968.

Amendments to the Virginia Act in 1983 extended the moratorium indefinitely—maintaining the ban "until a program for permitting uranium mining is established by statute." Act of Feb. 24, 1983, ch. 3, 1983 Va. Acts 3; (codified at VA. CODE ANN. § 45.1-283); Pet'rs' App. 178a. The legislative enactment actually included language that dismissed radiological concerns. In pertinent part, the Virginia enactment, as amended in 1983, read as follows:

> The General Assembly finds . . . that a preliminary study, identifying many potential environmental and other effects of uranium development . . . *has not identified any environmental or public health concern that could*

> *preclude uranium development in Virginia.*
>
> The General Assembly further finds, however, that a possibility exists that certain impacts of uranium development activity may reduce or potentially limit certain uses of Virginia['s] environment and resources, and that therefore additional evaluation of the costs and benefits of such activity is necessary before a final decision can be made regarding its acceptability in the Commonwealth.

1983 Va. Acts 3 (emphasis added); Pet'rs' App. 178a.[5]

Notwithstanding radiological concerns raised by citizen stakeholders or even dissenting members of a Uranium Administrative Group ("UAG") consisting

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[5] The quoted language appears in the legislative enactment from 1983, but it is not in the codified text of the Virginia Act, which simply states:

> Notwithstanding any other provision of law, permit applications for uranium mining shall not be accepted by any agency of the Commonwealth prior to July 1, 1984, and until a program for permitting uranium mining is established by statute. For the purpose of construing § 45.1-180 (a), uranium mining shall be deemed to have a significant effect on the surface.

VA. CODE ANN. § 45.1-283 (2018).

of non-legislators—such concerns, as they were understood in the early 1980s, were not dispositive for the General Assembly as a whole in enacting the moratorium. Rather, the 1983 Acts of Assembly included language which suggests that the legislature, based on a preliminary study from that time period, "had not identified any environmental or public health concern" that would justify maintaining a ban on uranium mining. *Id.* According to Chapter 3 of the 1983 Acts of Assembly, the moratorium was needed for an array of factors, including "local concerns." *Id.* Consequently, the General Assembly sought additional cost-benefit studies to determine whether uranium mining would be a net-positive for the Commonwealth's economic development.

The 1983 amendments to the Virginia Act also directed the UAG to submit a report to the Virginia Coal and Energy Commission. *See* Pet'rs' App. 181a-182a. Although this directive included references to mining, milling, and tailings management, those analyses were to be conducted in the context of their relation to the economy as a whole. The concluding passages of the 1983 amendments to the Virginia Act, therefore, focused on the "socioeconomic effects of the uranium development activity at the specific site and its associated regulation on the local community and the Commonwealth," Pet'rs' App. 187a, and a "description of the costs and benefits of allowing the proposed uranium development activity" along with "a description of the person or groups of persons likely to receive the benefit or bear the costs. . . ." Pet'rs' App. 187a-188a. While the

1983 amendments surely mention "radionuclides" in sundry passages, the focus of the legislation was on the cost-benefit analyses, and as stated at the outset of the legislative chapter, "other local concerns." Pet'rs' App. 178a.

In sum, the language from the 1983 legislative enactment fits plainly within the zone of authority left to the States under the AEA and within traditional areas of State regulation that the *Pacific Gas* Court confirmed could justify slowing or even stopping uranium mining for "economic reasons." *Pacific Gas and Elec. Co. v. State Energy Res. Conservation and Dev. Comm'n*, 461 U.S. 190, 222-23 (1983). Indeed, while the Virginia Act is exclusively limited to uranium mining, the *Pacific Gas* Court left to States far greater autonomy to affect the "development of nuclear power" beyond the reach of Virginia's narrowly tailored law. *Id.* As the Court held:

> Congress has left sufficient authority in the States to allow the development of nuclear power to be slowed or even stopped for economic reasons. Given this statutory scheme, it is for Congress to rethink the division of regulatory authority in light of its possible exercise by the states to undercut a federal objective. The courts should not assume the role which our system assigns to Congress.

Id. at 223.

Seeking to extend the meaning of the Virginia Act far beyond its text, Petitioners cite to a series of statements made by legislators, candidates for office, and unelected private citizens, all made approximately three decades after the last legislative action by the General Assembly in 1983. *See* Pet'rs' Br. 19 (citing Pet'rs' App. 239a-97a).[6] Inquiring into the motive of a state legislature is especially problematic. *See, e.g., Shady Grove Orthopedic Assoc.s, P.A. v. Allstate Ins. Co.*, 559 U.S. 393, 404 (2010) (the "approach of determining whether state and federal rules conflict based on the subjective intentions of the state legislature is an enterprise destined to produce 'confusion worse confounded'") (internal citation omitted); *Murphy v. Nat'l Collegiate Athletic Ass'n*, 138 S.Ct. 1461, 1480 (2018) (for preemption the touchstone is whether the law itself "confers rights or imposes restrictions that conflict with the federal law"); *United States v. Woods*, 571 U.S. 31, 47-48 (2013) (noting the inapplicability of statements of intent "written after passage of the legislation" which "therefore d[o] not inform the decisions of the members of Congress who vot[e] in favor of the [law]" and holding that "[p]ost-enactment legislative history (a contradiction in terms) is not a legitimate tool of statutory

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[6] The statements of private citizens with no official role in the Virginia General Assembly cannot possibly be leveraged to infer the intent of the legislature decades after the enactment of a statute.

interpretation.") (citations omitted); *Pacific Gas and Elec. Co.*, 461 U.S. at 216 ("What motivates one legislator to vote for a statute is not necessarily what motivates scores of others to enact it.").

The challenge is exacerbated here, as "legislative intent is not officially recorded in Virginia."[7] For that reason, "[i]t is well-settled [in Virginia courts] that 'we determine the General Assembly's intent from the words contained in the statute.'" *Newberry Station Homeowners Ass'n, Inc. v. Bd. of Supervisors of Fairfax Cty.*, 285 Va. 604, 614, 740 S.E.2d 548, 553 (2013) (internal citation omitted). Where the language of a Virginia statute is straightforward and unambiguous, "resort to legislative history and extrinsic facts is not permitted because we take the words as written to determine their meaning." *Id.* (citation omitted).

The Virginia rule on legislative interpretation is relevant were this Court to consider how the Virginia Act is applied within the Commonwealth. Under the Virginia Act, it is legal for Petitioners to construct a facility to mill uranium ore that has been mined out-of-state and to process that ore into U_3O_8 (*i.e.*, yellowcake) in Virginia. For comparison's sake, the Cameco Corporation is one of the world's largest uranium companies. Ore slurry from Cameco's McArthur River mine has historically been transported "in special containers 80 kms [kilometers] southwest to Key Lake where it's milled and blended for processing with low-grade ore

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[7] *See* DLS *supra*, note 4.

stockpiled at the mill."[8] Similarly, the ore slurry from Cameco's Cigar Lake deposit "is trucked in special containers to . . . [the] McClean Lake mill 70 kms [kilometers] northeast."[9] The feasibility of transporting ore would likely depend on the market price for a mill's finished product, which in recent decades has swung from below $20 per pound of yellowcake to over $160 per pound when adjusted for inflation.[10] Any application of Virginia's statute within the Commonwealth, however, would not fluctuate with the price of uranium.

Finally, to the extent this Court would look to legislative motive at all, it undeniably would be the motive of the legislature that enacted the Virginia Act, not one of several legislatures that failed to take any action between 2009 and 2014. Not only are statements made between 2009 and 2014 irrelevant for inferring the intent of the General Assembly in 1983, they are also impossible to ascribe to a single legislature given that the House of Delegates reorganized three times during that timeframe, the Virginia Senate reorganized twice, and two Governors served as chief executive of the

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[8] Cameco Corp., *Businesses*, https://www.cameconorth.com/about/businesses (last visited Aug. 20, 2018).

[9] *Id.*

[10] *See* NATIONAL RESEARCH COUNCIL, URANIUM MINING IN VIRGINIA: SCIENTIFIC, TECHNICAL, ENVIRONMENTAL, HUMAN HEALTH AND SAFETY, AND REGULATORY ASPECTS OF URANIUM MINING AND PROCESSING IN VIRGINIA, 93 (2012), https://doi.org/10.17226/13266.

Commonwealth.[11] *See Abbott v. Perez*, 138 S.Ct. 2305, 2325 (confirming that when challenging legislative districts that were finally adopted in 2013, "there can be no doubt about what matters: It is the intent of the 2013 Legislature" and not the intent of the 2011 legislature that adopted "defunct and never-used plans"); *see also Hunter v. Underwood*, 471 U.S. 222, 233 (1985) (reviewing the constitutionality of a 1901 Alabama law based on the motivation of the legislature at the time of "its original enactment" and declining to consider whether the law "would be valid if enacted today").

III. Uranium Mining Is Inconsistent with the Vision for Economic Development that Southern Virginia Has Pursued Over Many Decades.

The Commonwealth, working with local governments represented by *amici*, long ago chose an economic path for Southern Virginia that includes building a stable economy focused on agriculture, tourism, motorsports, education, and other complimentary industries. This path does not include a large uranium mine.[12]

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[11] Members of the Virginia House of Delegates are elected to two-year terms in odd-numbered years, after which the House reorganizes, electing a Speaker and making Committee assignments. Members of the Virginia Senate are elected to four-year terms in odd-numbered years, with the Senate reorganizing following each general election in which Senators are elected.

[12] As one local civic leader recently observed, "I see a beautiful river, and I can see shops and technology companies. All of those things fit together. I don't see a mine." Robert

Even the modern, *non*-legislative history cited by Petitioners (which, as stated in Part II, *supra*, is irrelevant to the preemption analysis), evinces a host of motives for not amending the Virginia Act, including state economic development motives. Thus, Delegate Glenn R. Davis (R-Virginia Beach), reportedly expressed a preference for offshore drilling for natural gas, along with wind and solar power, as "technologies [that] hold much more promise for domestic energy production and Virginia Beach job creation than uranium mining does." Pet'rs' App. 244a. Delegate Manoli Loupassi (R-Richmond) articulated the economic concerns in greater detail:

> The anticipated economic benefits of the proposed mining operation are speculative. The operation of uranium mining is price-dependent. When prices are high, mines flourish. When prices drop, uranium mines close and uranium miners lose their jobs. ... The 'Boom to Bust to Boom to Bust' cycle is well-documented in the uranium mining industry, and has shown amazing consistency over the past 25 years.

Pet'rs' App. 264a-66a.

Powell, *Solon of Southern Virginia: Civil leader raises concerns about uranium mining in his home county*, VIRGINIA BUSINESS MAGAZINE, (June 28, 2012), http://www.virginiabusiness.com/news/article/solon-of-southern-virginia.

A National Academy of Sciences study on uranium mining in Virginia ("NAS Report") confirms many justifications for building a diverse and stable economy in Southern Virginia without uranium mining.[13] The NAS Report, for example, identifies various adverse impacts for surface water and groundwater quantity and quality from the state-regulated mining activities and wholly distinct from any federally regulated processing of uranium ore that might occur after mining.[14]

Critical to the business interests of Southern Virginia, the NAS Report also documents the boom-and-bust nature of the uranium mining industry, making it especially unwelcome for communities looking to stabilize their economies. The NAS Report notes that uranium prices spiked in the 1970s, but shortly thereafter suffered a steep and sustained decline: "there were depressed uranium prices for the 1980s and 1990s with spot prices well below the cost of production for most uranium mines."[15] In fact, the NAS Report shows that from 1989 through 2004, the spot price of uranium remained at or below $20 per pound when adjusted a

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[13] *See* NATIONAL RESEARCH COUNCIL, *supra* note 10.

[14] *See id.* at 181-87, 193-97, 199.

[15] *See id.* at 92.

for inflation[16] Today, publicly available data show that prices for uranium remain near $25.[17]

These figures are sobering to local economic development leaders, given that Petitioners' public filings with Canadian securities administrators show that development of the Coles Hill Deposit would not be economically viable at such low prices. Petitioners' recent securities filing claims that the Coles Hill Deposit "has the potential for attractive economics based on an assumed U_3O_8 price of $64 per lb," requiring a dramatic increase in uranium prices before mining could even begin in Southern Virginia.[18] The volatility of the project as a whole is confirmed by the disclosure that a "change in the prices of uranium of $5.00 per lb results in a potential change in the project NPV [net present value] of $110.0 million."[19] Even more disconcerting

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[16] *See id.* at 93.

[17] *See* Ux Consulting Company, LLC, *UxC Nuclear Fuel Price Indicators*, https://www.uxc.com/p/prices/UxCPrices.aspx (last visited Aug. 29, 2018) (showing a weekly spot price of $26.10 as of August 20, 2018, and a month-end price of $25.70 as of July 30, 2018).

[18] Virginia Energy Resources, Inc., *Management Discussion and Analysis: 1st Quarter Ended March 31, 2018*, 4 (downloadable through the System for Electronic Document Analysis and Retrieval (SEDAR), which "is a filing system developed for the Canadian Securities Administrators," and published online at https://www.sedar.com/homepage_en.htm).

[19] *Id.*

for *amici* is the disclosure that the project might not be economically feasible to mine at all: "overly onerous regulations might dramatically increase the estimates for capital expenditures and operating costs for the Coles Hill project to the point where the required return on capital is insufficient to support the advancement of the project to commercial production."[20]

In short, *amici* continue to maintain non-safety justifications for leaving the Commonwealth's moratorium undisturbed. These justifications serve legitimate State interests, none of which are preempted by the AEA.

IV. The Doctrine of Laches Should Protect Local Communities That Have Relied on Petitioners' Prior Acceptance of the Virginia Act.

Virginia's uranium mining ban was first enacted in 1982 and amended in 1983. In the intervening thirty-five years, the Southern Virginia region has developed a diverse economy. Petitioners are only now raising their preemption claim, long after significant, non-uranium investments in the region have been made. Astoundingly, Petitioners filed this challenge after pledging to local communities that they would leave the moratorium undisturbed pending resolution of the NAS Report. *See* Part III, *supra*. In the *Danville Register & Bee* and elsewhere, Petitioner Virginia Uranium, Inc. affirmed:

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[20] *Id.* at 13.

> We are prepared to work with members of the General Assembly in 2012 to lift the moratorium on uranium mining if, and only if, the NAS concludes that this can be done with the highest regard for the well-being of people, livestock and the environment. . . . On the other hand, if the NAS finds that uranium mining would entail unacceptable risks, we will not pursue lifting the moratorium in 2012. Period.[21]

In similar language published in the Norfolk-based *Virginian-Pilot*, Petitioners further asserted their acquiescence to the role of the Virginia General Assembly:

> We are committed to heeding the findings of the study when they are released, regardless of the outcome. If, and only if, the NAS concludes that properly regulated uranium mining can be done safely, we intend to pursue lifting the moratorium in the General Assembly. . . . On the other hand, if the NAS finds that uranium mining cannot

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[21] Walter Coles, *No End-Run Around the Study*, DANVILLE REGISTER & BEE, Mar. 28, 2011, A8 (reproduced in the Appendix to this brief).

> be done safely, we will obviously not pursue lifting the moratorium.[22]

Domestic travel and tourism in Halifax County, Pittsylvania County, and the City of Danville alone supported 2,100 jobs and more than $41.6 million in payroll for 2016, the most recent year for which data are available. Tourism in these communities further generated more than $206 million in total expenditures as calculated by the Virginia Tourism Corporation, including more than $14 million in state and local tax receipts.[23]

According to an analysis by the Weldon Cooper Center for Public Service at the University of Virginia, Pittsylvania County benefited from more than $340 million in direct economic impacts from agriculture-related industries in 2015, with total economic impacts from agriculture topping out at $412.9 million. [24] In fact, agriculture-related

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[22] Walter Coles, *Uranium Company Renews Pledge to Protect Virginians*, VIRGINIAN-PILOT, Mar. 27, 2011, 8 (Hampton Roads section) (reproduced in the Appendix to this brief).

[23] *See* Virginia Tourism Authority, *The Economic Impact of Domestic Travel on Virginia Counties 2016*, at 27-28 (2017), https://www.vatc.org/wp-content/uploads/2017/09/2016_Economic_Impact_of_Domestic_Travel_on_Virginia_and_Localities.pdf.

[24] *See* TERANCE J. REPHANN, WELDON COOPER CENTER FOR PUBLIC SERVICE AT THE UNIVERSITY OF VIRGINIA, THE ECONOMIC IMPACT OF VIRGINIA'S AGRICULTURE AND FOREST INDUSTRIES 54 (2017), http://www.vdacs.virginia.gov/pdf/weldoncooper2017.pdf.

industries provide the Counties that are home to, and immediately adjacent to, the Coles Hill Deposit (Pittsylvania, Henry, Halifax, Franklin, Bedford, and Campbell counties) a total of $3.2 *billion* in economic benefits annually.[25]

Private boarding school education is also a significant part of the Southern Virginia economy. Hargrave Military Academy and Chatham Hall are nationally prominent, private boarding schools located in Chatham, Virginia. Chatham Hall was founded in 1894 and draws students from an international pool of applicants. Hargrave Military Academy, founded in 1909, is an exceptional private military boarding school that also prides itself on its international reputation and influence. Both schools sit less than ten miles, by car, from the Coles Hill Deposit.

All of this economic development occurred while Petitioner, Virginia Uranium, Inc., and its predecessor companies accepted the Commonwealth's mining ban as a duly enacted law. Virginia Uranium, Inc., was founded in January of 2007, but according to Petitioner it was preceded by a "predecessor company," Marline. [26] Marline

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[25] *See id.* When the benefits from forestry-related industries are included, the total economic benefit exceeds $5.3 billion. *Id.*

[26] *See* Virginia Uranium, Inc., *History of VUI and Coles Hill*, http://www.virginiauranium.com/who-we-are/history-of-coles-hill/ (last visited August 1, 2018) ("On January 16, 2007 Virginia Uranium was formed, with Walter Coles as chairman .

investigated the Coles Hill Deposit in 1982, the very same year that the Virginia General Assembly enacted the Virginia Act.[27]

Petitioners failed to raise any concerns regarding federal preemption of the Virginia Act for more than thirty years, while *amici* and the Commonwealth worked to build the economy of Southern Virginia without uranium mining. "The principle that the passage of time can preclude relief has deep roots in our law. . . . It is well established that laches, a doctrine focused on one side's inaction and the other's legitimate reliance, may bar long-dormant claims for equitable relief." *City of Sherrill, N.Y. v. Oneida Indian Nation of New York*, 544 U.S. 197, 217 (2005). *See SCA Hygiene Products Aktiebolag v. First Quality Baby Products, LLC*, 137 S.Ct. 954, 960 (2017) ("Laches is 'a defense developed by courts of equity' to protect defendants against 'unreasonable, prejudicial delay in commencing suit.'") (quoting *Petrella v. Metro-Goldwyn-Mayer, Inc.*, 134 S.Ct. 1962, 1973 (2014)); *see also Cheney v. U.S. Dist. Court for D.C.*, 542 U.S. 367, 379 (2004) ("Laches might bar a petition for a writ of mandamus if the petitioner 'slept upon his rights . . . and especially if the delay has been prejudicial to the [other party], or

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. . Norman Reynolds, who had been president of *the predecessor company, Marline*, brought his valuable experience to the table as a Director and as President and Chief Executive Officer.") (emphasis added).

[27] *See* Katherine E. Slaughter, *Will Uranium Get a Glowing Welcome in Virginia?*, 28 VA. ENVTL. L. J. 483, 487 (2010).

to the rights of other persons.'") (quoting *Chapman v. Cty. of Douglas*, 107 U.S. 348, 355 (1883)) (alterations in original). Hence, the doctrine of laches should bar Petitioners from seeking the declaratory and injunctive relief they have requested here.

CONCLUSION

The Virginia General Assembly's legislative enactment in 1983 represents a legitimate exercise of the State's historic police powers. The judgment of the Court of Appeals should be affirmed.

Respectfully submitted,

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Appendix

APPENDIX

I. LIST OF *AMICI CURIAE*

**MEMBERS OF
THE SOUTHERN VIRGINIA DELEGATION TO
THE VIRGINIA GENERAL ASSEMBLY,
LOCAL CHAMBERS OF COMMERCE,
CIVIC, TRADE, AND ECONOMIC
DEVELOPMENT ASSOCIATIONS,
AND MUNICIPALITIES**

Members of the Southern Virginia Delegation to the Virginia General Assembly:

State Senator William M. Stanley, Jr.

Senator Frank M. Ruff, Jr.

Delegate Leslie R. "Les" Adams

Delegate James E. Edmunds, II

Delegate Daniel W. Marshall, III

Delegate Thomas C. Wright, Jr.

Municipalities:

Halifax County, Virginia Board of Supervisors

Town Council of Halifax, Virginia

Town Council of South Boston, Virginia

Town of Clarksville, Virginia

Chambers of Commerce:

Danville-Pittsylvania County Chamber of Commerce

Halifax County, Virginia Chamber of Commerce

Clarksville, Virginia Lake Country Chamber of Commerce

Civic, Trade, and Economic Development Associations

Halifax County, Virginia Farm Bureau

Halifax County Department of Tourism

River District Association (Danville, Virginia)

Economic Development Authority for the Town of Clarksville, Virginia

The Alliance for Progress in Southern Virginia

The Virginia Coalition

Danville Industrial Development, Incorporated

Danville Area Development Foundation

Industrial Development Authority of Halifax County, Virginia

Industrial Development Authority of South Boston, Virginia

II. *Description of Amici*

The Southern Virginia delegation to the Virginia General Assembly includes six State Senators and Delegates whose districts comprise the Coles Hill Deposit in Pittsylvania County and many of the surrounding communities in the region. The delegation includes State Senator William M. Stanley, Jr., a Republican representing the 20th Senatorial District; Senator Frank M. Ruff, Jr., a Republican representing the 15th Senatorial District; Delegate Leslie R. "Les" Adams, a Republican representing the 16th House District; Delegate James E. Edmunds, II, a Republican representing the 60th House District; Delegate Daniel W. Marshall, III, a Republican representing the 14th House District; and Delegate Thomas C. Wright, Jr., a Republican representing the 61st House District. The legislative districts for Senator Stanley and Delegate Adams encompass the entirety of the Coles Hill Deposit.

The Chambers of Commerce for Halifax County, Pittsylvania County, the City of Danville, and the town of Clarksville, along with the Industrial Development Authority for Halifax County, the Industrial Development Authority of South Boston, Virginia, and the Economic Development Authority for the Town of Clarksville, collectively represent hundreds of businesses, from sole proprietors to companies with over 350 employees. These organizations have worked together for decades to improve business opportunities in the region and to promote a vibrant, profitable, business community for Southern Virginia. The Chambers and related associations also collaborate with the Halifax County, Virginia Farm Bureau, which works on

behalf of the area's farmers to promote agriculture and agriculture-dependent businesses.

The Danville Industrial Development Authority, Inc., organized in 1947, is primarily engaged in promoting and supporting industrial development in the City of Danville, Virginia and Pittsylvania County, Virginia. It often coordinates its efforts with the Danville Area Development Foundation, Inc., organized in 1958, which is primarily engaged in assisting and promoting the industrial and commercial development of the City of Danville, Virginia and the immediate surrounding area. They are joined by the River District Association, which was formed in 1999 to coordinate efforts to revitalize the downtown Danville community. In addition, the Alliance for Progress in Southern Virginia, based in Danville, and the Virginia Coalition, based in Halifax County, have coordinated with business leaders opposed to uranium mining in Southern Virginia.

The municipal government *amici* include the Board of Supervisors of Halifax County, Virginia and the towns of South Boston, Halifax, and Clarksville. Collectively, they are home to more than 35,000 residents. The scenic rivers and nearby Buggs Island Lake are popular destinations for camping, fishing, hunting, boating, swimming, and water skiing. Halifax County is also home to the Virginia International Raceway ("VIR"), a nationally recognized motorsports destination and venue. VIR has been ranked by Road & Track Magazine as one of the top ten "North American race tracks you need

to visit." The Halifax County Department of Tourism is a joint governmental partnership with Halifax County, Virginia, the Town of South Boston and the Town of Halifax. It serves as the official marketing organization for these municipalities, working to promote agritourism, motorsports, arts and culture, and the natural scenic beauty of Southern Virginia.

III. Walter Coles, *Uranium Company Renews Pledge to Protect Virginians*, VIRGINIAN-PILOT, Mar. 27, 2011, at 8 (Hampton Roads section).

Your editorial mischaracterizes our company's position on the National Academy of Sciences study of uranium mining in Pittsylvania County, as well as the General Assembly's deliberations on whether to lift Virginia's moratorium on uranium mining.

Our company has unequivocally said that the well-being of Virginia's residents and the sustainability of our environment are our foremost concerns.

To ensure the protection of public health and the environment, we have consistently supported the independent study being conducted by the National Academy of Sciences (NAS). We have provided all of the resources, data and expertise at our disposal to ensure the NAS has everything it needs to leave no stone unturned.

We are committed to heeding the findings of the study when they are released, regardless of the outcome. If, and only if, the NAS concludes that properly regulated uranium mining can be done

safely, we intend to pursue lifting the moratorium in the General Assembly. This does not undermine the study, precisely because our efforts are contingent upon just one possible outcome of the study.

On the other hand, if the NAS finds that uranium mining cannot be done safely, we will obviously not pursue lifting the moratorium.

For those concerned about rushing a vote in the General Assembly, keep in mind that 2012 will mark the end of a long and orderly process conducted by the state over the last three years that has involved numerous studies and public hearings. Furthermore, lifting the moratorium would be only the first step in a lengthy process. Developing state regulations and obtaining the necessary permits will take years and allow ample opportunities for public comment, technical and scientific review and scrutiny by all stakeholders.

The editorial failed to point out that it has been the strident opponents of uranium mining who have consistently undermined the NAS study, not Virginia Uranium.

In an April 2009 letter to the Richmond Times-Dispatch, representatives of the three leading opponents of uranium mining Virginia – the Southern Environmental Law Center, the Piedmont Environmental Council and the Virginia League of Conservation Voters – made their position clear when they said they "did not want the study in the first place."

The bottom line is that our company will not push to lift the moratorium if the NAS determines that it would pose unacceptable risks. We hope

opponents of uranium mining will adopt the same reasonable approach if the NAS finds that mining can be done safely.

We should all have full faith and confidence in the Academy to deliver an independent, scientifically based assessment, and we should all fully commit to abide by its findings.

Walt Coles, Sr.
Chairman of the Board
Virginia Uranium Inc.
Chatham

IV. Walter Coles, *No End-Run Around the Study*, DANVILLE REGISTER & BEE, Mar. 28, 2011, at A8.

Because of irresponsible commentary in some area publications, I would like to reaffirm our company's position on the National Academy of Sciences' study of uranium mining in Virginia and the General Assembly's deliberations on whether to lift Virginia's moratorium on uranium mining.

Since the formation of Virginia Uranium Inc. in 2007, we have consistently said that the well-being of Virginia's residents and the sustainability of our environment are our foremost concerns. We all breathe the same air, drink the same water and enjoy the same majestic beauty of Virginia's environment. We will not undertake any actions that would in any way threaten these sacred treasures.

To ensure the protection of public health and the environment, we have consistently agreed with the

need for an independent, scientific study of the potential impacts of uranium mining in Virginia.

Since the Virginia Coal and Energy Commission tasked the National Academy of Sciences to conduct such a study in 2009, we have unequivocally supported the efforts of the NAS. We have provided all of the resources, data and expertise at our disposal to ensure that the NAS has everything it needs to leave no stone unturned.

The NAS will release the findings of its study in December. We are fully committed to heeding those findings – regardless of the outcome. Our position on this has remained unchanged since the inception of the study. We are committed to this process and dedicated to following the conclusions of the study.

We sincerely hope the NAS will find that properly regulated uranium mining and milling can be conducted safely in Virginia. We do not believe there is anything irresponsible or inappropriate about making preparations for this possibility.

We are prepared to work with members of the General Assembly in 2012 to lift the moratorium on uranium mining if, and only if, the NAS concludes that this can be done with the highest regard for the well-being of people, livestock and the environment. This does not in any way undermine the NAS study, precisely because our plans are contingent upon just one possible outcome of the NAS study.

For those who may be concerned that lifting the moratorium would be a rush to mining uranium, we assure you that, in fact, it would only be the first step in a very lengthy process that will take years before a single shovel enters the ground. Developing

state regulations and obtaining the necessary permits will take years and allow ample opportunities for public comment, technical and scientific review and careful scrutiny by all stakeholders.

On the other hand, if the NAS finds that uranium mining would entail unacceptable risks, we will not pursue lifting the moratorium in 2012. Period.

Ironically, it has been the opponents of uranium mining who have consistently and vociferously undermined the NAS study, not Virginia Uranium. Mining opponents have characterized the NAS as corrupt, pro-nuclear and inadequate to the task of the study and have even lambasted the study itself as a waste of money and a rigged, foregone conclusion.

In an April 2009 letter to the Richmond Times-Dispatch, representatives of the three leading opponents of uranium mining in Virginia – the Southern Environmental Law Center, the Piedmont Environmental Council and the Virginia League of Conservation Voters – went so far as to say that they "did not want the study in the first place." Commonsense would suggest that these powerful, influential groups be held to account for their outright disregard for the NAS and its scientific-based study.

The bottom line is that neither our company nor the General Assembly will push to lift the moratorium if the NAS determines that uranium mining and milling cannot be done safely. We hope opponents of uranium mining will adopt the same reasonable approach if the NAS finds that mining can be done safely. We should all have full faith and

confidence in the Academy to deliver an independent, scientifically based assessment, and we all should fully commit to abiding by its findings.

Coles, a resident of Chatham, is chairman of Virginia Uranium, Inc.

No. 16-1275

In the
Supreme Court of the United States

VIRGINIA URANIUM, INC., ET AL.,
Petitioners,

v.

JOHN WARREN, ET AL.,
Respondents.

ON PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT

BRIEF OF NATIONAL CONFERENCE OF STATE LEGISLATORS, NATIONAL LEAGUE OF CITIES, AND INTERNATIONAL CITY/COUNTY MANAGEMENT ASSOCIATION AS *AMICI CURIAE* IN SUPPORT OF RESPONDENTS

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INTEREST OF AMICI CURIAE[1]

The National Conference of State Legislatures (NCSL) is a bipartisan organization that serves the legislators and staffs of the Nation's 50 States, its Commonwealths, and Territories. NCSL provides research, technical assistance, and opportunities for policymakers to exchange ideas on the most pressing state issues. NCSL advocates for the interests of state governments before Congress and federal agencies and regularly submits amicus briefs to this Court in cases, like this one, that raise issues of vital state concern.

The National League of Cities (NLC) is dedicated to helping city leaders build better communities. NLC is a resource and advocate for 19,000 cities, towns, and villages, representing more than 218 million Americans.

The International City/County Management Association (ICMA) is a non-profit professional and educational organization consisting of more than 11,000 appointed chief executives and assistants serving cities, counties, towns, and regional entities. ICMA's mission is to create excellence in local governance by advocating and developing the professional management of local governments throughout the world.

SUMMARY OF THE ARGUMENT

Petitioners seek to compel a state to allow uranium minimum on nonfederal land based on

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[1] This brief was prepared by counsel for amici and not by counsel for any party. No outside contributions were made to the preparation or submission of this brief. Both parties have given written consent to the filing of this brief.

federal preemption, even though the federal act in question is silent as to uranium mining on nonfederal land, mining is historically subject to state police power, and a statute in the state in question bans uranium mining. Such extraordinary relief would not be subject to a limiting principle. The Court should affirm the dismissal of such an unwonted claim.

Petitioners' implied preemption argument is also extraordinary, because it depends on divining the subjective intent of a state legislature rather than relying on the plain text of the state's legislation. Respondents persuasively contend that peering behind statutory text in search of some unexpressed actual motive is a fruitless endeavor.

For one thing, if legislative motive is a factual inquiry, then depositions and other discovery of sitting legislators might follow. Discovery of legislators and legislative staffers would be highly intrusive and also run afoul of the states' analogs to the federal Speech or Debate Clause, which are found in more than forty states. Determinations of the subjective intent behind legislation are also unreliable due to the mix of motives animating legislation and the passage of time.

Furthermore, states lack the resources to produce the types of legislative history available to courts construing federal statutes. The available legislative history documentation therefore varies greatly from state to state, making consistent preemption analysis based on legislative history impossible.

Finally, there is no workable rule for determining the subjective intent of state legislators. Allowing Petitioners' preemption claim to proceed would raise many unanswerable questions about when federal-

state conflicts can be resolved based on matters outside the statutory text.

ARGUMENT

Amici agree fully with the contentions in the Brief for Respondents. Amici write separately to oppose the extraordinary relief sought by Petitioners and to address further the problems inherent in determining a state legislature's subjective intent. *See* Resp. Br. at 38-43.

I. Petitioners seek extraordinary relief that is not subject to any limiting principle.

Petitioners seek extraordinary relief—a federal court injunction compelling a state sovereign, the Commonwealth of Virginia, to grant uranium mining permits on nonfederal land. They seek this relief even though the federal act in question never mentions uranium mining on nonfederal land, a Virginia statute does not permit uranium mining, and "the regulation of mining has long been recognized as a legitimate exercise of a state's police powers." *Simpson v. Commonwealth of Kentucky*, No. 88-5065 (L), 1989 WL 20625 (6th Cir. Feb. 28, 1989) (citing *Booth v. Indiana*, 237 U.S. 391, 396 (1915); *Wilmington Star Mining Co. v. Fulton*, 205 U.S. 60, 73 (1907) ("The use and enjoyment of mining property being subject to the reasonable exercise of the police power of the state. . . .")).

Amici fear the lack of any limiting principle on such relief. For example, imagine a three-step process, with the steps in chronological order dubbed A, B, and C. Might federal courts enjoin a state to require step A even though the state bans step A, step A has historically been subject to the state's police

power, and the federal act in question only regulates steps B and C? That is the relief Petitioners seek here.

Or imagine a federal Paper Production Act, the purpose of which includes encouraging the production of paper, overseen by a Federal Paper Agency (FPA). The Act is silent as to the clear cutting of trees on nonfederal land while allowing the clear cutting of trees on federal land. The Act and the FPA regulate safe practices only for the milling of trees into paper and the safe handling of pulp waste. A state does not allow clear cutting of trees. After the price of paper goes up, landowners seek an injunction requiring the state to allow them to clear cut trees on nonfederal land. Can a federal court so enjoin the state?

The dissent below would seemingly say "Yes, bring on the chainsaws." *See* Pet. 47a-48a (stating that the Act's purpose is to unleash "the power of the private sector" to develop nuclear energy). Amici contend that "No," federal silence as to step A while regulating only steps B and C does not preempt a state's ability to regulate step A, particularly where regulating step A has historically been a legitimate exercise of state police power. To force states to allow some preliminary step, in a process for which Congress has regulated only later steps, is wrong because "it frustrates rather than effectuates legislative intent simplistically to assume that *whatever* furthers the statute's primary objective must be the law." *Rodriguez v. United States*, 480 U.S. 522, 526 (1987) (per curiam).

Again, how the rule sought by Petitioners might be limited is unclear. What if a federal act regulates only step C and neither step A nor step B, which have both historically been subject to state police power?

Might a federal court enjoin a state that prohibits steps A and B so as to require the state to permit both of them? Truly Petitioners' claim would lead to such slippery slopes. A ruling for Petitioners would inject mischief and uncertainty into preemption analysis. Amici ask the Court for this reason to affirm the lower court.

II. Preemption analysis should not turn on the subjective intentions of state legislators.

Petitioners also make an extraordinary implied preemption argument. They would require courts to look past the plain language of decades-old state statutes and attempt to divine a single "true purpose" of state legislators at the time of enactment. They argue that Virginia's ban on uranium mining should be preempted because Virginia *intended also* to ban uranium millings and tailings storage. But the Virginia legislature did not actually ban uranium milling or tailings storage; it only banned mining. Who knows what the Virginia legislature intended in the early 1980s when it passed the ban? It should not even matter when the federal statute only addresses uranium milling or tailings storage.

Preemption should not be based on an exploration for the subjective intent of state legislators, for numerous reasons, including that: (1) discovery of state legislators' subjective intentions would be intrusive and inconclusive; (2) the availability of state legislative history varies widely from state to state; and (3) there is no workable rule for determining the subjective intent of state legislators.

1. If determining the purpose of a challenged state law involves an issue of historical fact, as Petitioners and the Federal Government assume, *see*

Resp. Br. at 34, then plaintiffs may seek to discover the purposes of state legislators in enacting legislation, including by depositions, interrogatories, and more. Such discovery would be improper, however, because it is "not consonant with our scheme of government for a court to inquire into the motives of legislators." *Tenney v. Brandhove*, 341 U.S. 367, 377 (1951). The Speech or Debate Clause of the United States Constitution explicitly protects Senators and Representatives from legal inquiries based on their speech during sessions of their respective houses. U.S. Const. art. I, § 6, cl. 1 ("for any speech or debate in either House, they shall not be questioned in any other place").

The Constitution included the Speech or Debate Clause because "[i]n order to enable and encourage a representative of the public to discharge his public trust with firmness and success, it is indispensably necessary, that he should enjoy the fullest liberty of speech, and that he should be protected from the resentment of every one." *Tenney*, 341 U.S. at 373 (quoting II Works of Jams Wilson 38 (Andrews ed. 1896)). The clause means that "[l]egislators are immune from deterrents to the uninhibited discharge of their legislative duty, not for their private indulgence but for the public good." *Tenney*, 341 U.S. at 377.

The Constitution of Virginia contains a similar provision that grants immunity to legislators "for any speech or debate in either house." Va. Const. art. IV, § 9. The clause also exempts members of the Virginia General Assembly from being subject to civil process during sessions. *Id.* The Eastern District of Virginia has held that the Virginia Speech or Debate Clause and the United States Constitution's Speech or

Debate Clause prohibit a plaintiff from subpoenaing and deposing a Virginia state legislator to inquire into his legislative activity or his motives for the activity. *Greenburg v. Collier*, 482 F. Supp. 200, 204 (E.D. Va. 1979).

Forty-three other state constitutions contain a section similar to the Speech or Debate Clause. Steven F. Huefner, *The Neglected Value of the Legislative Privilege in State Legislatures*, 45 Wm. & Mary L. Rev. 221, 224 (2003). This protection is critical because "society's increasing propensity to litigate and contemporary distrust of government almost guarantee that disaffected individuals—and even some political opportunists—will seek creative ways to gain relief through, extract information from, or merely harass or burden, elected state representatives." *Id.* at 226-27. Thus, discovery of state legislators' subjective intent might not even be allowed.

Discovery of state legislators' subjective intent, if even allowed, would put a burden on legislative resources, including the time of legislators and their staffers. And to what end would such fact discovery lead? Legislators should not be expected to recollect their intentions years after the fact. According to the "forgetting curve," people are typically unable to retrieve roughly 50% of information one hour after receiving it. Joyce W. Lacy & Craig E. L. Stark, *The Neuroscience of Memory: Implications for the Courtroom*, Nat'l Inst. Health, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4183265/pdf/nihms-624859.pdf (last visited Aug. 28, 2018). Memory is especially malleable, and legislators' might understandably recall motivations that did not exist at the time or forget ones that did. *See id.*

Eyewitness testimony is considered most reliable when recorded immediately after an event, certainly not thirty-five years later. *Id.*

2. Moreover, states do not have the resources of the Federal Government and its ability to create extensive legislative history. The resources for creating and the availability of different types of legislative history varies significantly from state to state. *See* Bart M. Davis, Kate Kelly, & Kristin Ford, *Use of Legislative History: Willow Witching for Legislative Intent*, 43 Idaho L. Rev. 585, 586 (2007). Searching for legislative intent can be a "perilous quest" due to "the nature of the legislative process and the unreliability of the records as consensus documents." *Id.* at 600. For the intent of Congress, courts at least have the reliable recordation of Congressional debates on the floor and in committees. Richard A. Danner, *Justice Jackson's Lament: Historical and Comparative Perspectives on the Availability of Legislative History*, 13 Duke J. Comp. & Int'l L. 151, 165-70 (2003). At the state level, however, there is no guarantee of finding legislative history as extensive as the Congressional records.

Some states are able to create significantly more or less legislative history than others. Rhode Island, for example, has no floor or committee debate records available. *Id.* The only legislative history in Missouri is official copies of bills, without support documentation of legislative comments or debate. Missouri Legislative History: Legislative History, U. Mo. Sch. L., http://libraryguides.missouri.edu/c.php?g=28632&p=175352 (last visited Aug. 27, 2018). Idaho does not make drafting records of bills available to the public and does not record legislative floor debate. Davis, supra, at 586. It does make

available committee minutes and attachments and some statements of legislative intent from state House and Senate Reports. *Id.* Colorado researchers can find procedural history, audio records of legislative hearings and floor debates, summaries of committee meetings, and different versions of the bill. Peggy Lewis & Matt Dawkins, *Researching Legislative History*, 44 Colo. L. 33 (2015). North Carolina provides the chronological bill history, committee minutes, and possibly floor debate audio records for some laws. North Carolina General Assembly Legislative Library, *North Carolina Legislative History Step by Step*.

On the other hand, Texas provides audio and video of legislative floor debates, bill files with committee reports and analyses, house and senate journals, statements of legislative intent, committee meeting minutes, and session summaries. Davis, *supra*, at 586; Legislative Reference Library of Texas: Typical Materials, https://lrl.texas.gov/legis/legintent/typicalMaterials.cfm#minutes (last visited Aug. 27, 2018).

Virginia has little legislative history. Virginia does not officially record legislative intent through any means. Legislative Reference Center: Legislative History, Va. Division Legis. Servs., http://dls.virginia.gov/lrc/leghist.htm (last visited Aug. 27, 2018). The only tools to search for legislative intent are drafts of bills, fiscal impact statements, and video archives of floor sessions. *Id.* Transcripts are not provided for the videos. *Id.*

The varying availability of legislative history materials at the state level confirms this Court's statement that "determining whether state and

federal rules conflict based on the subjective intentions of the state legislature is an enterprise destined to produce 'confusion worse confounded,'" *Shady Grove Orthopedic Assocs., P.A. v. Allstate Ins. Co.*, 559 U.S. 393, 404 (2010) (quoting *Sibbach v. Wilson & Co.*, 312 U.S. 1, 14 (1941)). The same law might survive preemption in one state and be preempted in another simply due to the differences in available legislative history materials. *Id.* Because laws are often passed for multiple purposes, determining the different purposes "may be impossible to discern." *Id.* Federal judges asked to preempt state law "would be condemned to poring through state legislative history—which may be less easily obtained, less thorough, and less familiar than its federal counterpart." *Id.* at 405 (citing R. Mersky & D. Dunn, *Fundamentals of Legal Research* 233 (8th ed. 2002); Torres & Windsor, *State Legislative Histories: A Select, Annotated Bibliography*, 85 L. Lib. J. 545, 547 (1993)). This Court has rejected the approach required by Petitioners' preemption theory before and should do so again here.

3. Finally, without a workable rule for determining the subjective intent of state legislators, Petitioners' claim should not go forward. *See Philip Morris USA v. Williams*, 549 U.S. 346, 354 (2007) (declining to permit punitive damages for injuries to nonparty victims because it "would add a near standardless dimension to the punitive damages equation. How many such victims are there? How seriously were they injured? Under what circumstances did injury occur?"); *United States v. Ursery*, 518 U.S. 267, 284 n.2 (1997) (rejecting proposed rule as "unworkable"); *Caperton v. A.T. Massey Coal Co.*, 556 U.S. 868, 893 (2009) (Roberts,

C.J., dissenting).(a standard is problematic when it "fails to provide clear, workable guidance for future cases"). Any test for seeking the subjective intent of a state legislature would raise more questions than it could possibly answer. *See Caperton*, 556 U.S. at 893-98 (Roberts, C.J., dissenting) (listing forty questions created by the majority's test for judicial recusal).

There is no workable rule for determining the subjective intent of state legislators. How exactly could a federal court determine the subjective intent of a state legislature that passed a statute? Would the statements of a majority of then-serving legislators as to their intent be sufficient? How about language regarding legislative intent in a unanimous committee report? But what if that language was left out of the final legislation or modified? What about the statement of a bill's sponsor? What about legislators' statements made during consideration of a prior version of a statute? And how to determine the subjective intent of a legislature in a state without resources to produce much in the way of legislative history? In short, there is no workable rule for the divining of subjective legislative intent.

This lack of a workable standard suggests a possible reason why Petitioners argue so repeatedly that Virginia has "conceded" that the 1983 Virginia law in question has a purpose bringing it within the preempted field.

In conclusion, whether state legislation may be preempted should be assessed based on the plain language that the state legislature carefully arrived at. Legislative history is "often murky, ambiguous, and contradictory," and it can be cherry-picked to support a desired outcome. *Exxon Mobil Corp. v.*

Allapattah Servs., 545 U.S. 546, 568 (2005). Courts should not disregard the plain language of a state statute based on speculation of legislative intent not contained in the text. *Lexington Ins. Co. v. Precision Drilling Co.*, 830 F.3d 1219, 1221 (10th Cir. 2016) (opinion of then-Judge Gorsuch). In *Lexington*, the Tenth Circuit reasoned that "the task of trying to discern the textually unexpressed intentions of (or really attribute such intentions to) a legislative body composed of scores or often hundreds of individuals is a notoriously doubtful business." *Id.* Petitioners' preemption case depends on that "notoriously doubtful business" and invites unwarranted second-guessing of the enactments of separate sovereigns. Amici urge this Court to affirm the dismissal of Petitioners' complaint.

CONCLUSION

The judgment of the Fourth Circuit should be affirmed.

Respectfully submitted,

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No. 16-1275

IN THE

Supreme Court of the United States

VIRGINIA URANIUM, INC., *et al.*,
Petitioners,

v.

JOHN WARREN, *et al.*
Respondents.

ON A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT

BRIEF OF NUCLEAR ENERGY INSTITUTE AS *AMICUS CURIAE* IN SUPPORT OF PETITIONERS

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STATEMENT OF INTEREST OF AMICUS CURIAE NUCLEAR ENERGY INSTITUTE

In accordance with Supreme Court Rule 37, the Nuclear Energy Institute, Inc. ("NEI") respectfully submits this brief in support of Petitioners.[1]

NEI is responsible for establishing and advocating on legal, regulatory, technical, and policy matters affecting the commercial nuclear energy industry. Our members include licensed operators of commercial nuclear power plants in the United States, nuclear plant designers, architect/engineering firms, nuclear fuel fabricators and other nuclear material licensees, and other entities involved in all aspects of the nation's nuclear energy sector.

NEI has a pressing interest in this case. The comprehensive federal regulatory framework that Congress has established over the past sixty years undergirds the continued viability of the nuclear industry. An important feature of that framework is the federal government's exclusive authority over the regulation of radiological risks, an authority established by the Atomic Energy Act, 42 U.S.C. §§ 2011, *et seq.*, and administered today largely by the U.S. Nuclear Regulatory Commission ("NRC"). The nuclear industry relies upon that federal exclusivity. Without it, states could impose inconsistent safety

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[1] No counsel for a party authored this brief in whole or in part, and no counsel or party made a monetary contribution intended to fund the preparation or submission of this brief. No person other than *amicus curiae*, its members, or its counsel made a monetary contribution to its preparation or submission. All parties have consented in writing to the filing of this brief, and the consent letters are on file with the clerk.

standards, creating disruption, uncertainty, and higher costs. State laws that would frustrate the established regulatory framework for addressing radiological risk would not only threaten the continued availability of commercial nuclear power, but also discourage investment in new nuclear technologies and undermine national security.

SUMMARY OF ARGUMENT

In enacting the Atomic Energy Act and its amendments, Congress carefully balanced when the federal government has exclusive control over nuclear regulation and when states may regulate. The line is bright. The federal government has exclusive regulatory authority over risks associated with radiological materials, while states have some authority over non-radiological aspects of nuclear development. States may, for example, engage in ratemaking, and enact land use regulations affecting nuclear generation. But the federal government regulates radiological risks in the nuclear fuel cycle, including uranium upon its removal from its place of deposit in nature, through enrichment, nuclear fuel production, the operation in nuclear generation facilities, and the disposal of nuclear waste.

The federal government's occupation of the field of radiological risk is settled law and categorical. "[T]he safety of nuclear technology [is] the exclusive business of the Federal Government, which has occupied the entire field of nuclear safety concerns." *In re Hanford Nuclear Reservation Litig.*, 534 F.3d 986, 1003 (9th Cir. 2008) (citations omitted). Thus, any state law that seeks to regulate nuclear safety is preempted. *See, e.g., English v. Gen. Elec. Co.*, 496

U.S. 72, 81–82 (1990). As this Court has observed, the boundaries of the "pre-empted field" are defined in part "by reference to the motivation behind the state law[.]" *Id.* at 84. States are permitted to regulate areas impacting nuclear energy only "for *purposes other* than protection against radiation hazards." 42 U.S.C. § 2021(k) (emphasis added). Under this Court's authority, states may not regulate nuclear safety based on some other pretextual regulatory purpose.

But, some states have tried. Federal courts have repeatedly had to reinforce the federal government's exclusive regulatory authority over radiological safety by rejecting state laws passed with a nuclear-safety motivation or which affect nuclear safety. *See, e.g., Entergy Nuclear Vt. Yankee, LLC v. Shumlin*, 733 F.3d 393 (2d Cir. 2013); *Skull Valley Band of Goshute Indians v. Nielson*, 376 F.3d 1223 (10th Cir. 2004).

If affirmed, the Fourth Circuit's reasoning here would open the door to state regulation of radiological risks. Predicated on state-specific concerns over the radiological safety of certain mining activities (uranium milling and uranium tailings[2]), Virginia has permanently foreclosed the safe development of the largest known uranium deposit in the United States.

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[2] Milling is the process of grinding uranium ore to facilitate the separation the uranium from rock. Once ground, milling also involves chemically separating the uranium. This produces a quantity of concentrated uranium, which can be enriched, and a larger quantity of waste called "tailings." Pet. App. 54a-55a.

NEI therefore asks this Court to overturn the Fourth Circuit's judgment sanctioning the state's reach into exclusive federal authority over the safety of processing uranium. Preserving the exclusivity of the extensive federal regulatory regime governing radiological risks is necessary to maintain the legal and economic stability on which the nuclear industry continues to depend. Stability is beneficial not only to the industry. Nuclear power is the nation's largest source of carbon-free power, and a healthy nuclear industry is vital to our national security. Preserving the existing federal regulatory framework thus supports both the advancement of clean energy and our national security.

ARGUMENT

I. The Federal Government Occupies the Field of Nuclear Safety, Regulating the Entire Lifecycle of Radiological Materials from Uranium Processing to the Disposition of Spent Fuel.

The Atomic Energy Act of 1954 ("AEA" or "the Act"), reflected Congress' determination that "the national interest would be best served if the Federal Government encouraged the private sector to become involved in the development of atomic energy for peaceful purposes under a program of federal regulation and licensing." *Pacific Gas & Elec. Co. v. State Energy Resources Conservation & Dev. Comm'n*, 461 U.S. U.S. 190, 207 (1983) (citing H.R. Rep. No. 2181, 83d Cong., 2d Sess. 1-11 (1954)). That determination reflected a fundamental shift from the federal government's focus on nuclear energy for military power to its focus on spawning the private application of nuclear energy for electrical power. To

encourage the latter, the Act established the Atomic Energy Commission and the basic framework of today's nuclear regulatory regime.[3] *Roberts v. Florida Power & Light Co.*, 146 F.3d 1305, 1306 (11th Cir. 1998). *See also* 42 U.S.C. §§ 2011 *et seq.* Through the AEA, Congress has sought to achieve two goals: the promotion of civil uses of nuclear energy and the management of any resulting radiological risks. *O'Conner v. Commonwealth Edison Co.*, 13 F.3d 1090, 1105 (7th Cir. 1994) ("Congress has attempted for nearly fifty years to encourage private sector involvement in the nuclear industry and at the same time has sought to protect the public.").

Some basic background may illuminate the boundaries of state and federal regulation that this case presents. The NRC does not regulate uranium mining (*i.e.*, the physical extraction of uranium ore from the ground). *See, e.g., In the Matter of Hydro Res., Inc. (P.O. Box 777 Crownpoint, Nm 87313)*, 63 N.R.C. 510, 510 (May 16, 2006). But extensive

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[3] In 1974, Congress enacted the Energy Reorganization Act of 1974, 88 Stat. 1233, as amended, 42 U.S.C. § 5801 *et seq.*, which abolished the AEC. The AEC's functions were divided between two regulatory bodies, with its licensing and related regulatory functions transferred to the Nuclear Regulatory Commission, and all other functions, including the enrichment-services program, transferred to the Energy Research and Development Administration, § 5814(c), which later became part of the U.S. Department of Energy (DOE), *see* §§ 301 and 703 of Department of Energy Organization Act, 91 Stat. 577, 606, 42 U.S.C. §§ 7151(a) and 7293. Today, the NRC administers the federal nuclear safety regulatory scheme for commercial nuclear activities, with support from DOE and the Environmental Protection Agency as well.

federal regulations apply as soon as uranium is removed from its "place of deposit in nature." 42 U.S.C. § 2092. Once unearthed, uranium ore is milled to extract from the surrounding rock a refined uranium product referred to as "yellowcake," which is used to make nuclear fuel. *See* U.S. Energy Info. Admin.,https://www.eia.gov/energyexplained/index.php?page=nuclear_fuel_cycle (last checked July 23, 2018). This milling process also results in a byproduct—the remainder of the ore after the milling process—known as uranium "tailings," which must be processed. *Id.* The chemical processing during milling and the storage of tailings both typically take place near the mine.

NRC regulations (and some EPA regulations) govern uranium processing, including milling at or near the mine site. In particular, federal regulations require a license for any person who seeks to "possess and use source material [natural uranium is source material] in conjunction with uranium or thorium milling, or byproduct material at sites formerly associated with such milling." *See generally* 10 C.F.R. 40, App. A. These extensive federal regulations also regulate "the siting, operation, decontamination, decommissioning, and reclamation of mills and tailings or waste systems and sites at which such mills and systems are located." *Id.*; *see also* 42 U.S.C. §§ 2022(b)(1)(2), 2111; 10 C.F.R. 40.1-40.3, 40.20-21, 40.32, 40.51; 40 C.F.R. 192.

The federal regime accomplishes the AEA's goal of protecting the public from radiological risks by regulating the nuclear industry *extensively*. The administration and enforcement of the AEA and its many implementing regulations cover all stages of

nuclear development and all phases of the production, use, and disposition of uranium and other radiological materials. This includes the regulation of uranium milling, tailings management, enrichment, the transportation of nuclear fuel, the use of nuclear fuel, the disposition of nuclear waste, and related activities involving radiological risk. *See supra*. The federal government also licenses and comprehensively regulates the construction and operation of nuclear power plants. *See* https://www.nrc.gov/reactors/new-reactors/regs-guides-comm.html (last checked July 23, 2018). The federal government imposes many requirements on licensees to maintain various forms of commercial and self-insurance, here too to protect the public against radiological risks. *See generally* 10 C.F.R. 50.54(w), 140.119(a)(4). And, federal regulations also extend even beyond the lifespan of nuclear facilities, as comprehensive regulations govern the decommissioning of nuclear power plants after they have stopped production. *See, e.g.*, U.S. Nuclear Reg. Comm'n,https://www.nrc.gov/waste/decommissioning.html (last checked July 23, 2018). In short, "a nuclear power plant operator. . . is required to comply with extensive regulations promulgated by the NRC." *Int'l Bhd. of Elec. Workers, Local 97 v. Niagara Mohawk Power Corp.*, 143 F.3d 704, 707 (2d Cir. 1998).

The federal framework at the same time accomplishes the AEA's goal of promoting commercial nuclear development by regulating radiological risks *exclusively*. Given the scale of capital expenditures necessary for nuclear development, and the costs and complexity associated with nuclear research and

development in advanced nuclear technologies, the nuclear industry depends, crucially, on the legal certainty that comes with centralized federal regulation. NEI's members do not seek weak regulation. Rather, they need to know that the extensive regulatory regime governing them reflects the view of the federal expert agency charged with its administration.

Reflecting these policy objectives, Congress put in place a regulatory system making the field of nuclear safety, "the exclusive business of the Federal Government." *Pacific Gas & Elec.*, 461 U.S. at 208. The Act thus gave the AEC "exclusive jurisdiction to license the transfer, delivery, receipt, acquisition, possession and use of nuclear materials." *Pacific Gas*, 461 U.S. at 207 (citing 42 U.S.C. §§ 2014, (e), (z), (aa), 2061–2064, 2071–2078, 2091–99, 2111–14 (1976 and Supp. IV 1980)). "Upon these subjects, no role was left for the states." *Id.*

That is not to say state regulation does not touch the nuclear industry. Since the passage of the AEA, states have retained authority to regulate some economic aspects of nuclear power, as well as various types of non-radiological environmental and land use issues that also impact the nuclear industry. As this Court has observed, the relevant history here "indicates that from the passage of the Atomic Energy Act in 1954, through several revisions, and to the present day, Congress has preserved the dual regulation of nuclear-powered electricity generation[.]" *Pacific Gas*, 461 U.S. at 211–12. "[T]he federal government maintains complete control of the safety and 'nuclear' aspects of energy generation; the states exercise their traditional

authority over the need for additional generating capacity, the type of generating facilities to be licensed, land use, ratemaking, and the like." *Id.*

In 1959, for example, "to promote an orderly regulatory pattern between the Commission and State governments with respect to nuclear development and use and regulation of byproduct, source, and special nuclear materials," *see* 42 U.S.C. §2021(a)(3), Congress passed an amendment to the AEA "prohibit[ing] the states from regulating the safety aspects of nuclear development." *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 250 (1984). The 1959 amendment "was premised on [Congress'] belief that the Commission [*i.e.*, the AEC and later the NRC] was more qualified to determine what type of safety standards should be enacted in this complex area." *Silkwood*, 464 U.S. at 250. Meanwhile, "state public utility commissions or similar bodies . . . [were] "empowered to make the initial decision regarding the need for power." *Vermont Yankee Nuclear Power Corp. v. Nat. Res. Def. Council, Inc.*, 435 U.S. 519, 550 (1978).[4]

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[4] The 1959 AEA amendment did allow the federal government "by agreements with state governors to discontinue its regulatory authority over certain nuclear materials under limited conditions," *Pacific Gas*, 461 U.S. at 209, but only where such agreements are "coordinated and compatible" with federal regulations. *Id.* (citing S.Rep. No. 870). This flexibility is not relevant here, however, as Virginia has not coordinated with the federal government to regulate uranium milling and tailings management.

II. In Deciding Federal Preemption Issues, the Atomic Energy Act Directs Courts To Examine Whether the State Acted for Radiological Safety Purposes.

Policing the respective boundaries of federal and state authority requires consideration of the purpose underlying state regulation. States may not regulate radiological safety under the cover of some other regulatory purpose. The AEA itself makes this clear. Section 2021(k) of the Act provides that states may regulate areas impacting nuclear energy only "*for purposes other than protection against radiation hazards.*" 42 U.S.C. § 2021(k) (emphasis added). By permitting regulation "for purposes other than protection against radiation hazards," Congress "underscored the distinction drawn in 1954 between the spheres of activity left respectively to the federal government and the states." *Pacific Gas*, 461 U.S. at 210. If a state's purpose in enacting the law is motivated by nuclear safety, or has an "actual effect on nuclear safety," it is preempted. *English*, 496 U.S. at 84.

Courts do not "'blindly accept the articulated purpose'" of state regulation in evaluating the motivation underlying it. *Entergy Nuclear Vt. Yankee*, 733 F.3d at 416 (quoting *Greater N.Y. Metro Food Council, Inc. v. Giuliani*, 195 F.3d 100, 108 (2d Cir. 1999)). Such unquestioned acceptance would allow states to "'nullify nearly all unwanted federal legislation.'" *Id.* Courts therefore engage in a "more searching review to determine whether a statute was enacted based upon radiological safety concerns." *Id.* In undertaking permissible state economic regulation of "a nuclear generating facility," for example, a state

may "not even consider the safety aspects." *Suffolk Cty. v. Long Island Lighting Co.*, 728 F.2d 52, 58 (2d Cir. 1984).

Upon reviewing a challenged state regulation, courts have looked carefully at the regulation's underlying purposes to resolve claims that the regulation actually targets radiological risks. For example, in *Skull Valley Band of Goshute Indians v. Nielson*, 376 F.3d 1223 (10th Cir. 2004), the Tenth Circuit considered whether the AEA preempts numerous Utah statutes, one of which designated as a state highway the only road that would have provided access to a proposed spent nuclear fuel storage facility. That statute also "requir[ed] the consent of the governor and the state legislature" before any "company engaged in the transportation or storage of spent nuclear fuel was allowed to drive on it." *Skull Valley*, 376 F.3d at 1251-52. When challenged, Utah defended the challenged statutes by claiming they were facially neutral: "According to the Utah officials, the district court erred by failing to explain how these statutes affect radiological safety decisions." *Id.* at 1252. The Utah officials "criticize[d] the district court for relying on findings regarding the legislature's motive in passing these statutes." *Id.*

The Tenth Circuit correctly rejected those arguments. "*Pacific Gas*, *Silkwood*, and *English*," the court explained, "require consideration of the purpose of the allegedly preempted statute, along with its effects." *Skull Valley*, 376 F.3d at 1252. Looking beyond the claimed facial neutrality of the statute, the court concluded that Utah had undertaken to regulate nuclear safety notwithstanding exclusive federal regulatory jurisdiction. "The state legislator

who sponsored the Road Provisions explained that they established a 'moat' around the proposed SNF [spent nuclear fuel] site, and the Governor added that the Road Provisions will add substantially to our ability as a state to protect the health and safety of our citizens against the storage of high-level nuclear waste." *Id.* (internal citations omitted). Because the record revealed that the Utah laws were enacted for reasons of radiological safety, they were preempted.

Similarly, in *Entergy Nuclear Vt. Yankee, LLC v. Shumlin*, 733 F.3d 393 (2d Cir. 2013), Vermont sought to regulate nuclear safety with a law providing that a nuclear facility long in operation could continue to operate only with the consent of the state legislature. *Entergy Nuclear*, 733 F.3d at 416. Vermont argued that two non-safety purposes within the state's regulatory authority, including the promotion of an "increased use of a diverse array of renewable power sources; and . . . of energy sources that are more cost-effective," motivated the law. *Id.*

The Second Circuit granted that "Vermont's asserted policy interests would not necessarily interfere with the preempted concern of radiological safety," 733 F.3d at 416, but noted correctly that the "inquiry does not end at the text of the statute." *Id.* As the Second Circuit stated, if the preemption analysis ended with the text of the law or an express purpose, a state could regulate nuclear safety "by simply publishing a legislative committee report articulating some state interest or policy—other than frustration of the federal objective—that would be tangentially furthered by the proposed state law." *Id.* (citation omitted).

The Second Circuit thus went on to consider "the legislative record," which contained "references, almost too numerous to count, [that] reveal legislators' radiological safety motivations and reflect their wish to empower the legislature to address their constituents' fear of radiological risk, and [legislators'] belief that the plant was too unsafe to operate." *Id.* at 420. The Vermont law was therefore preempted. *Id.*

This Court, too, has concluded both that "[a] state moratorium on nuclear construction grounded in safety concerns falls squarely within the prohibited field" of state regulation, and that "a state judgment that nuclear power is not safe enough to be further developed would conflict" with Congress' controlling view. *Pacific Gas*, 461 U.S. at 213. Still other courts have likewise recognized that "a state law related to nuclear power is preempted if it . . . is motivated by safety concerns." *Vermont Yankee Nuclear Power Corp. v. Entergy Nuclear Vermont Yankee, LLC*, 683 F.3d 1330, 1347 (Fed. Cir. 2012);[5] *see also United States v. Manning*, 527 F.3d 828, 836–37 (9th Cir. 2008) ("The CPA is preempted because it regulates within the field that is occupied by the AEA"); *United States v. Commonwealth of Kentucky*, 252 F.3d 816, 823 (6th Cir. 2001) ("The permit conditions therefore represent an attempt by the Cabinet to regulate materials covered by the AEA based on the Cabinet's

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[5] In other preemption contexts, too, courts have emphasized the "real purpose of the state law," as opposed to "the area of law that the state statute addresses." *Movsesian v. Victoria Versicherung AG*, 670 F.3d 1067, 1075 (9th Cir. 2012) (citations omitted); *see also Am. Ins. Ass'n v. Garamendi*, 539 U.S. 396, 426 (2003) (rejecting stated purpose of state law).

safety and health concerns, and are thus preempted.").

III. The Decision Below Conflicts With the Federal Government's Exclusive Regulatory Authority over the Radiological Risk of Nuclear Materials, on which the Nuclear Industry Has Long Relied.

In this case, as in *Skull Valley* and *Entergy Nuclear*, the respondent states or state officials defended their attempt to regulate nuclear safety by arguing their laws were neutrally stated. Petitioners have alleged otherwise.

In the 1970s, the largest known uranium ore deposit in the United States was discovered in Virginia. Pet. App. 5a. The Virginia General Assembly reacted by calling on state regulators to "evaluate the environmental effects . . . and any possible detriments to the health safety, and welfare of Virginia citizens which may result from uranium exploration, mining, or milling." *Id.* (quoting 1981 Va. Acts 1404). In 1982, the Virginia General Assembly permitted some uranium exploration, but imposed a one-year moratorium on uranium mining. 1982 Va. Acts 426. A year later, Virginia extended its ban on uranium mining indefinitely. 1983 Va. Acts 3; Pet. App. 178a. The 1983 moratorium extension also created a working group to consider "all pathways which radionuclides and other contaminants may enter or affect ground waters, receiving surface waters, and the air and the biota and be transmitted to critical receptors as result of mining, milling, and tailing management at the specific site." 1983 Va. Acts 3; Pet. App. 183a-84a. Two years later, the

commission and working group suggested that under certain conditions the mining moratorium should be lifted. *See* Pet. App. 5a. Notwithstanding that recommendation, and despite Virginia Uranium Inc.'s longstanding efforts since to have the ban lifted, a complete ban on uranium mining remains in effect.

Petitioners Virginia Uranium Inc.'s (*et al.*) suit asked the United States District Court for the Western District of Virginia to declare the ban preempted by federal law, and to issue an injunction compelling Virginia to consider uranium mining permits. In response, state officials moved to dismiss, requiring the district court to accept the Petitioners' factual allegations for the purposes of resolving that motion. And indeed the district court acknowledged Virginia Uranium's allegation "that the moratorium rested on 'radiological safety concerns' associated with milling and tailings management," *see* Pet. App. 68a, as the text of the 1983 Act—in particular its reference to "radionuclides and other contaminants," and "mining, milling, and tailing management"—indicates. Nevertheless, the district court granted the motion to dismiss on the grounds that the text of Virginia's prohibition itself only applied to mining. *Id.* at 71a-80a.

On appeal to the Fourth Circuit, Virginia Uranium Inc. emphasized its allegations in the district court that safety concerns regarding milling and tailings *motivated* Virginia's ban. In affirming, a divided panel "agree[d] that milling and tailings storage are 'activities' under section 2021(k) because they are regulated by the NRC, and states may therefore not regulate them except for purposes other than protection against radiation hazards." Pet. App.

at 13a-14a (citing 42 U.S.C. §§ 2021, 5842, 7918-19; 10 C.F.R. § 40.3). The majority nonetheless held that "the plain language of the commonwealth's ban does not mention uranium or tailings storage," and thus there was no need to look to the State's purpose in passing the law. Pet. App. 14a.

The majority's conclusion that the ban's language renders irrelevant Virginia's motivation for the ban is inconsistent with the Atomic Energy Act and this Court's approach to the Act's preemptive effect. As Judge Traxler explained in dissent, Virginia banned uranium mining "because of radiological safety concerns regarding uranium milling and tailings management," ignoring that "Congress has taken away a state's ability to limit mining for this particular reason." Pet. App. 20a. Judge Traxler explained that the fact that the text of the statute addresses mining and not safety is simply not determinative in the preemption analysis. Pet. App. 42a. Instead, and consistent with *Pacific Gas*, *Skull Valley*, and *Entergy Nuclear*, Judge Traxler would have held that "state statutes enacted to protect against the radiological dangers of activities the AEA regulates are preempted *regardless of whether the statutory text reveals that purpose and regardless of whether the statute expressly prohibits an activity the Act regulates.*" *Id.* (emphasis original). The Petitioners' allegations and the legislative history leading to Virginia's ban indicate Virginia was motivated by radiological risks, but the Fourth Circuit majority looked past that history in limiting its analysis to the statutory language. Pet App. 40a (Traxler, J. dissenting).

In failing to consider the State's purpose in passing the mining ban, the majority departed from this Court's instructions in *Pacific Gas* and *English*, and, in doing so, also failed to adhere to the boundaries Congress has established for state regulation.

Virginia can regulate uranium mining for reasons genuinely unrelated to the safety of nuclear source materials or activities related to the risks of processing uranium.

But Virginia may not ban or suspend uranium mining motivated, in particular, by safety concerns related to the processing of uranium once extracted from the earth. A ban targeting the radiological risks of those activities interferes with the exclusive authority of the federal government and achieves something indirectly that a state could not do directly. Such a result turns preemption on its head, allowing a state to purposefully regulate radiological risks and short circuit federal regulation so long as the state does not mention safety in the language of the law.

IV. A Healthy Nuclear Industry Is Vital for National Security.

As Judge Traxler noted in his dissent below, "[t]he stakes in this case are significant," Pet. App. at 21a. Nuclear power is an integral part of the nation's domestic energy supply. Currently, the United States has 99 operating commercial nuclear reactors in 30 states that produce nearly 20 percent of our nation's electricity and nearly 60 percent of our carbon-free electricity. *See* U.S. Dept. of

Energy,https://www.energy.gov/ne/nuclear-power-summary-may-2018 (last checked July 23, 2018). A healthy nuclear industry is necessary both to satisfy the country's power demands and to meet clean air goals.

A healthy nuclear industry is important also for other aspects of national security. Indeed, there is broad expert consensus that U.S. national security requires a strong domestic nuclear industry, given that the industry in various ways supports not only the country's defense mission but also global nonproliferation. *See, e.g.*, M. Wallace, A. Roma, & S. Desai, Back from the Brink: A Threatened Nuclear Energy Industry Compromises National Security (July 2018) (the domestic commercial nuclear energy industry is of "critical importance to the country for national defense, research, economic growth, geopolitics, and international nonproliferation); Energy Futures Initiative, *The U.S. Nuclear Energy Enterprise: A Key National Security Enabler* (Aug. 2017) (explaining the central importance of a healthy domestic nuclear industry to national security); J. Carl & D. Fedor, *Keeping the Lights on at America's Nuclear Power Plants* (2017) (a robust nuclear power industry is necessary to protect U.S. leadership in technology, safeguard national security, and to reduce carbon emissions). For example, a strong commercial nuclear industry is essential to the national-defense supply chain, including for the nation's nuclear powered navy, which depends on the nuclear industry. *See The U.S. Nuclear Energy Enterprise, supra*, at 8 (explaining why "a strong domestic supply chain is needed to provide for nuclear Navy requirements"). *See also id.* at 9

("Without a strong nuclear energy program . . . the supply chain for both civilian and national security objectives will be challenging.").

The importance of the nuclear industry to national security can be seen, for instance, in expressions by Senators Cotton, Cruz and Inhofe, at the *certiorari* stage of this case, of their "support [for] the prudent development of U.S. natural resources [i.e., uranium]." *See Brief of Senator Tom Cotton, Senator Jim Inhofe, and Senator Ted Cruz as Amicus Curiae in Support of Petitioner* ("Cotton Amicus"), Case No. 16-1275 at 18 (May 25, 2017). But notwithstanding consistent (and bipartisan) recognition at the federal level of the importance of the nuclear industry for our economy, climate, and national security, the fact is that challenges at the local level sometimes remain. As Senator Cotton put it, there can be a "public penchant to stigmatize localities hosting nuclear facilities or to otherwise perceive the development of nuclear energy as unsafe." Cotton Amicus at 13 (citation omitted). "Public hostility is frequently manifested in state or local laws that attempt to dismantle what the federal government has already approved." *Id.*

To allow states to regulate radiological risks would undermine the federal regulatory framework on which the industry has long relied. Congress determined decades ago that exclusive federal regulation of radiological safety would best promote commercial nuclear development. New layers of state regulation on top of—or at odds with—the robust federal regime could prove counterproductive and unnecessarily costly to the industry supplying one-fifth of U.S. electricity.

There is much more than an abstract principle at stake here. If courts begin to allow state regulation of radiological safety so long as the regulation's language makes no mention of that goal and regulates indirectly, Congress' careful balance would be undone. Consider, as an illustration, the implication if in *Skull Valley*, *Entergy Nuclear*, and this case the state regulations targeting radiological risks were all allowed as within state authority. In that scenario, going forward any state could prevent the processing of uranium source materials (like Virginia is attempting), the operation of a nuclear power plant (like Vermont attempted), and the storage of spent nuclear fuel (like Utah attempted). That result—restricting the lifecycle of uranium production, use, and disposition—certainly would not leave much of a role for federal regulation. Such a result cannot square with the AEA, basic preemption principles, or with Congress' aim to promote a nuclear industry that in many ways has become so important to the nation and its security.

CONCLUSION

For the above reasons, the judgment of the Court of Appeals should be reversed.

Respectfully submitted,

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IN THE
Supreme Court of the United States

VIRGINIA URANIUM, INC., ET AL.,
Petitioners,

v.

JOHN WARREN, ET AL.,
Respondents.

On Writ of Certiorari
to the United States Court of Appeals
for the Fourth Circuit

BRIEF OF PREEMPTION LAW PROFESSORS AS *AMICI CURIAE* IN SUPPORT OF RESPONDENTS

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INTEREST OF *AMICI CURIAE*[1]

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[1] Pursuant to Supreme Court Rule 37.6, counsel for *amici* represent that they authored this brief in its entirety and that none of the parties or their counsel, nor any other person or entity other than *amici* or their counsel, made a monetary contribution intended to fund the preparation or submission of this brief. Pursuant to Rule 37.3(a), counsel for *amici* also represent that all parties have consented to the filing of this brief.

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INTRODUCTION

Legislative-motive inquiries have no place in this Court's Supremacy Clause jurisprudence. The Court does not embark on that fraught enterprise in any other area of preemption doctrine. And for good reason: a motive-based standard raises intractable conceptual and practical problems, and entails significant incursion into state sovereignty. Neither the Atomic Energy Act of 1954 nor this Court's decisions interpreting it require this Court to depart from its well-worn path. The Court should affirm.

SUMMARY OF ARGUMENT

Preemption in this case should not turn on the subjective motivations of the state officials who enacted Virginia's ban on uranium mining. In no area of preemption doctrine does the result turn on the purpose of the state law rather than its effects. Likewise, in the converse scenario, this Court has explicitly held that a benign state purpose (i.e., a purpose not to obstruct federal law) cannot save a state statute that has the effect of being an obstacle to Congress's goals. Petitioners' proposed test would thus create an aberration in preemption doctrine—a unique exception for the field of nuclear safety.

Legislative-motive inquiries are also anomalous in constitutional doctrine beyond preemption. Before the 1970s, this Court almost never considered legislative purpose. Since then, it has done so only in narrow areas like equal protection and the Establishment Clause. Even in those areas, an illicit motive generally cannot, standing alone, make a law unconstitutional. Petitioners' position not only departs from longstanding preemption doctrine but adopts a mode of analysis that is highly disfavored in modern constitutional law generally.

The Court's reluctance to inquire into legislative motive is well justified. As this Court recently explained, such inquiries raise intractable conceptual and practical problems. *See Shady Grove Orthopedic Assocs., P.A. v. Allstate Ins. Co.*, 559 U.S. 393, 404 (2010). In the preemption context, such an inquiry also poses a serious threat to federalism. This Court should therefore reject petitioners' legal standard and affirm.

ARGUMENT

Of the three types of preemption this Court has identified—express, field, and conflict preemption—only field and conflict preemption are at issue in this case, and this brief addresses petitioners' arguments regarding the former. The question in field preemption cases is whether Congress "intended to foreclose any state regulation in the *area*, irrespective of whether state law is consistent or inconsistent with federal standards." *Oneok, Inc. v. Learjet, Inc.*, 135 S. Ct. 1591, 1595 (2015). As "[i]n all pre-emption cases," field-preemption analysis begins "with the assumption that the historic police powers of the States were not to be superseded by the Federal Act unless that was the clear and manifest purpose of Congress." *Wyeth v. Levine*, 555 U.S. 555, 565 (2009) (alteration in original).

I. A Legislative-Motive Inquiry Here Would Be Unique In Preemption Doctrine And An Outlier In Constitutional Doctrine Generally

A. This Court Has Consistently Held That States' Intent Is Irrelevant to Preemption

1. This Court has long held that a state law is preempted only when it regulates in a field properly subject to federal regulation. The touchstone is what the State actually did, not why it did it.[2] The Court's decision in *Shady Grove Orthopedic Associates, P.A. v. Allstate Insurance Co.*, 559 U.S. 393 (2010), is illustrative. There, it did not matter what the state legislature might have intended to do or "[t]he manner

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[2] State legislative intent is equally irrelevant in conflict preemption, of which "field pre-emption may be understood as a species," *English v. General Elec. Co.*, 496 U.S. 72, 79 n.5 (1990), but petitioners do not invoke legislative intent in their conflict-preemption arguments here.

in which the law could have been written . . . ; what matter[ed] [wa]s the law the legislature *did* enact." *Id.* at 403.

Shady Grove went on to explain some of the fundamental problems that would arise from a legislative-motive-based approach to preemption. For one thing, it would produce arbitrary outcomes: "[O]ne State's statute could survive pre-emption . . . while another State's identical law would not, merely because its authors had different aspirations." *Id.* at 404. For another, it would be unfriendly to state prerogatives to look into motive rather than simply "accept[ing] the [state] law as written and test[ing] the validity of the Federal [law]." *Id.* For yet another, it would raise tremendous practical problems for courts. "Many laws further more than one aim, and the aim of others may be impossible to discern." *Id.* Trial courts would nonetheless have to attempt "to discern, in every [relevant] case, the purpose behind any putatively pre-empted state . . . rule." *Id.* That "task w[ould] often prove arduous"; "[h]ard cases" would "abound"; and "federal judges would be condemned to poring through state legislative history—which may be less easily obtained, less thorough, and less familiar than its federal counterpart." *Id.* at 404-05.

2. *Shady Grove* is just one in a long list of cases, covering a wide range of federal statutes, all with the same punchline: Not even the objective purpose of a state law, to say nothing of its legislators' subjective motivations, is relevant in preemption analysis. No area of modern preemption doctrine works otherwise—not immigration, *Arizona v. United States*, 567 U.S. 387 (2012); not arbitration, *AT&T Mobility LLC v. Concepcion*, 563 U.S. 333 (2011); not foreign affairs, *Crosby v. National Foreign Trade Council*, 530 U.S.

363 (2000); not railroads, *Kurns v. Railroad Friction Prods. Corp.*, 565 U.S. 625 (2012); and not energy rates, *Hughes v. Talen Energy Mktg., LLC*, 136 S. Ct. 1288 (2016), to list just a few.

Indeed, almost 50 years ago, this Court expressly overruled an earlier approach to preemption that turned on the purpose of state law. In *Kesler v. Department of Public Safety*, 369 U.S. 153 (1962), and *Reitz v. Mealey*, 314 U.S. 33 (1941), the Court had upheld state laws that—by leaving debts arising from car accidents in place regardless of bankruptcy—interfered with the goal of federal bankruptcy law to give debtors a clean slate. The Court in those two cases reasoned that the state laws were not preempted because their purposes were to promote road safety, rather than to provide relief to creditors. *See Kesler*, 369 U.S. at 174; *Reitz*, 314 U.S. at 37

That approach ended in *Perez v. Campbell*, 402 U.S. 637 (1971), in which the Court held that it would "no longer adhere to the aberrational doctrine of *Kesler* and *Reitz* that state law may frustrate the operation of federal law as long as the state legislature in passing its law had some purpose in mind other than one of frustration." *Id.* at 651-52. The purpose-driven approach of *Kesler* and *Reitz*, *Perez* explained, was aberrant because it removed the focus from the effects of the state law at issue, which ran contrary to preemption doctrine as far back as Chief Justice Marshall's opinion in *Gibbons v. Ogden*, 22 U.S. (9 Wheat.) 1 (1824). *See* 402 U.S. at 649-50 (also citing *Hines v. Davidowitz*, 312 U.S. 52, 67 (1941); *Sola Elec. Co. v. Jefferson Elec. Co.*, 317 U.S. 173, 176 (1942); *Hill v. Florida ex rel. Watson*, 325 U.S. 538, 542-43 (1945); *Free v. Bland*, 369 U.S. 663, 666 (1962); *Colorado Anti-Discrimination Comm'n v. Continental*

Air Lines, Inc., 372 U.S. 714, 722 (1963); *Sears, Roebuck & Co. v. Stiffel Co.*, 376 U.S. 225, 229 (1964); *Nash v. Florida Indus. Comm'n*, 389 U.S. 235, 240 (1967)); *see also Florida Lime & Avocado Growers, Inc. v. Paul*, 373 U.S. 132, 141-42 (1963) (focusing on "whether the purposes of the two laws are parallel or divergent" tends to "obscure more than aid" in determining whether state law is preempted by federal law) (emphasis omitted); *Napier v. Atlantic Coast Line R.R. Co.*, 272 U.S. 605, 612 (1926) (preemption analysis turns not on whether federal and state laws "are aimed at distinct and different evils" but on whether they "operate upon the same object"). The Court thus "conclude[d] that *Kesler* and *Reitz* can have no authoritative effect to the extent they are inconsistent with the controlling principle that any state legislation which frustrates the full effectiveness of federal law is rendered invalid by the Supremacy Clause." *Perez*, 402 U.S. at 652.

In the years since *Perez*, this Court has held the same line, time and again, as litigants try to save state statutes from preemption by pointing to benign legislative purposes. The Court explained in *Hughes v. Oklahoma*, 441 U.S. 322 (1979), that, "when considering the purpose of a challenged statute, this Court is not bound by '[t]he name, description or characterization given it by the legislature or the courts of the State,' but will determine for itself *the practical impact* of the law." *Id.* at 336 (quoting *Lacoste v. Department of Conservation of Louisiana*, 263 U.S. 545, 550 (1924)) (emphasis added; alteration in original). *Alessi v. Raybestos-Manhattan, Inc.*, 451 U.S. 504 (1981), held that, "[w]hatever the purpose or purposes of the New Jersey statute, we conclude that it 'relate[s] to pension plans' governed by [the Employee

Retirement Income Security Act of 1974 ('ERISA')]." *Id.* at 524 (second alteration in original). The Court in *International Paper Co. v. Ouellette*, 479 U.S. 481 (1987), noted that *Perez* stands for the proposition that "effect rather than purpose of a state statute governs pre-emption analysis." *Id.* at 498 n.19. In *Mackey v. Lanier Collection Agency & Service, Inc.*, 486 U.S. 825 (1988), the Court again reiterated the core idea of *Perez*: "Legislative 'good intentions' do not save a state law within the broad pre-emptive scope of [ERISA] § 514(a)." *Id.* at 830. In *Gade v. National Solid Wastes Management Ass'n*, 505 U.S. 88 (1992), the Court similarly held that, "[w]hatever the purpose or purposes of the state law, pre-emption analysis cannot ignore the effect of the challenged state action on the pre-empted field. The key question is thus at what point the state regulation sufficiently interferes with federal regulation that it should be deemed pre-empted." *Id.* at 107. And in *Gobeille v. Liberty Mutual Insurance Co.*, 136 S. Ct. 936 (2016), the Court featured the now-familiar refrain that "[a]ny difference in purpose does not transform this direct regulation of a central matter of [ERISA] plan administration into an innocuous and peripheral set of additional rules." *Id.* at 946 (citation omitted). State purpose and motive simply have no role in preemption analysis.

B. Judicial Scrutiny of Legislative Motive Is Disfavored in Constitutional Law Generally

In constitutional doctrine more generally, inquiries into legislative intent (particularly subjective motive) are also rare and increasingly disfavored.

In the nineteenth century, this Court "frequently rebuffed calls for judicial scrutiny of legislative motivation." Richard H. Fallon, Jr., *Constitutionally Forbidden Legislative Intent*, 130 Harv. L. Rev. 523,

534 (2016). That trend began early in our constitutional history. In *Fletcher v. Peck*, 10 U.S. (6 Cranch) 87 (1810), Chief Justice Marshall held that a court of law "cannot sustain a suit . . . founded on the allegation that the act is a nullity, in consequence of the impure motives which influenced certain members of the legislature which passed the law." *Id.* at 131.

For most of the twentieth century, legislative-intent inquiries remained both rare and restricted in scope.[3] The 1970s marked a shift in the Court's willingness to probe legislative intent. *See* Michael J. Klarman, *An Interpretive History of Modern Equal Protection*, 90 Mich. L. Rev. 213, 284-85 (1991). The inquiry became relevant in a limited number of contexts, including the Equal Protection Clause, the dormant Commerce Clause, the Establishment Clause, and the Free Exercise Clause. *See* Fallon, 130 Harv. L. Rev. at 525-26. Yet even in these areas the decisional significance of legislative intent remained quite limited. Impermissible legislative intent is, alone, sufficient to strike down a law in only a few cases.[4]

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[3] *See Tenney v. Brandhove*, 341 U.S. 367, 377 (1951) ("The holding of this Court in Fletcher v. Peck, that it was not consonant with our scheme of government for a court to inquire into the motives of legislators, has remained unquestioned.") (citation omitted); *United States v. O'Brien*, 391 U.S. 367, 383 (1968) ("It is a familiar principle of constitutional law that this Court will not strike down an otherwise constitutional statute on the basis of an alleged illicit legislative motive."); *Palmer v. Thompson*, 403 U.S. 217, 224 (1971) ("[N]o case in this Court has held that a legislative act may violate equal protection solely because of the motivations of the men who voted for it.").

[4] *Lemon v. Kurtzman*, 403 U.S. 602 (1971), and its progeny would overturn laws solely because their purpose was to promote religion. *See, e.g., McCreary Cty. v. ACLU of Kentucky*, 545 U.S. 844, 860 (2005). Many Justices have questioned the continuing validity of the *Lemon* test. *See Lamb's Chapel v. Center Moriches*

What is more, the nature of inquiries into legislative purpose, motive, and intent has changed even since the 1970s. Although the Court used to consider the subjective psychological motives of state officials,[5] more recent cases aim the legislative-intent inquiry at something like "objective purpose." *See id.* at 541-43. This version of legislative intent may be discerned in a manner akin to ordinary statutory interpretation, including inferring purpose from the distinctive effects of a law. *See, e.g., Shaw v. Reno*, 509 U.S. 630, 642 (1993) (striking a peculiarly shaped legislative district that was "so extremely irregular on its face that it rationally c[ould] be viewed only as an effort to segregate the races for purposes of voting").

II. Preemption Should Not Turn On Subjective Legislative Intent

Petitioners' position—that preemption under the Atomic Energy Act depends on subjective inquiry into state legislative motive—would raise numerous conceptual and practical problems. It would also implicate serious federalism concerns.

Union Free Sch. Dist., 508 U.S. 384, 398 (1993) (Scalia, J., concurring in the judgment) (explaining that six of the Justices serving in 1993 had criticized *Lemon* or joined opinions doing so).

[5] *See, e.g., Wallace v. Jaffree*, 472 U.S. 38, 56-57 (1985) (relying on legislative history to support a finding that the legislature acted with a constitutionally forbidden purpose of promoting prayer in public schools); *Personnel Adm'r v. Feeney*, 442 U.S. 256, 279 (1979) (stating that a "'[d]iscriminatory purpose' . . . implies that [a legislature] . . . selected or reaffirmed a particular course of action at least in part 'because of,' not merely 'in spite of,' its adverse effects upon an identifiable group"); *Village of Arlington Heights v. Metropolitan Hous. Dev. Corp.*, 429 U.S. 252, 265-66 (1977); *Church of the Lukumi Babalu Aye, Inc. v. City of Hialeah*, 508 U.S. 520, 540-41 (1993) (plurality opinion); *see also* Fallon, 130 Harv. L. Rev. at 537.

A. Legislative-Intent Inquiries Raise Serious Conceptual Problems

As this Court has recognized, it is doubtful whether the idea of *collective* intent—of the group of legislators and executive-branch officials who enacted the state legislation—is even intellectually coherent. As this Court stated, "[w]hat motivates one legislator to vote for a statute is not necessarily what motivates scores of others to enact it." *Pacific Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 216 (1983) (citing *O'Brien*, 391 U.S. at 383-84); *see* 2 Joseph Story, *Commentaries on the Constitution of the United States* 533 (Boston, Hilliard, Gray & Co. 1833) (mindsets of individual legislators might be "opposite to, or wholly independent of each other"). There is no reason to expect consistency in the disparate motives of different legislators for laws that may themselves "further more than one aim." *Shady Grove*, 559 U.S. at 404. Thus, as Justice Scalia wrote, looking for the purpose of a multimember body is likely "impossible." *Edwards v. Aguillard*, 482 U.S. 578, 636 (1987) (Scalia, J., dissenting); *see also* Kenneth A. Shepsle, *Congress Is a "They," Not an "It": Legislative Intent as Oxymoron*, 12 Int'l Rev. L. & Econ. 239, 249 (1992) (it is "fruitless to attribute intent to the product of [legislators'] collective efforts"); Robert C. Farrell, *Legislative Purpose and Equal Protection's Rationality Review*, 37 Vill. L. Rev. 1, 11 (1992) ("If legislative purpose is the mere aggregation of the motivations of individual legislators, then there seems no escaping the conclusion that the very idea of legislative purpose is incoherent."); John F. Manning, *Textualism and Legislative Intent*, 91 Va. L. Rev. 419, 427-32 (2005); Caleb Nelson, *What Is Textualism?*,

91 Va. L. Rev. 347, 353-57 (2005); Ronald Dworkin, *Law's Empire* 321-33 (1986).

Even if collective intent were a coherent idea, to go looking for it outside the well-marked boundaries of statutory interpretation would raise a slew of other difficult conceptual problems. *See* Fallon, 130 Harv. L. Rev. at 537-41. What legal rules determine how and when to ascribe an intention to a particular legislator? What if a forbidden intention existed but was not necessary to a legislator's vote? What percentage of legislators need to share a forbidden intention for a law to be tainted? What if the illicit intentions of some legislators (or lobbyists) drove them to persuade others to vote for a bill on permissible grounds—is that a sufficient causal link to bad intent? And, for all of these questions, what source of authority guides courts' answers?

B. Legislative-Intent Inquiries Raise Serious Practical Problems

The practical difficulties with discerning collective intent are just as large and no less crippling to the concrete judicial enterprise of deciding cases.

1. *A motive-based inquiry would produce arbitrary outcomes.* It is clear, as the Federal Government acknowledges, that "States retain the authority to regulate conventional uranium mining—or to prohibit it altogether." U.S. Cert. Br. 16, 18. Thus, under petitioners' rule, *Shady Grove*'s premonition would come to pass, in which "one State's statute could survive pre-emption . . . while another State's identical law would not, merely because its authors had different aspirations." 559 U.S. at 404; *see also Pacific Gas*, 461 U.S. at 216 ("it would be particularly pointless for us to engage in such inquiry here when it is clear that the states have been allowed to retain authority . . . to

halt the construction of new nuclear plants"); *O'Brien*, 391 U.S. at 384 ("We decline to void . . . legislation which Congress had the undoubted power to enact and which could be reenacted in its exact form if the same or another legislator made a 'wiser' speech about it.").

To illustrate: If a state law subsidized coal or wind power, it would be preempted under petitioners' view of the Atomic Energy Act if the legislators were motivated in part by a belief that increased use of those power sources would reduce demand for—and the radiological hazard from—nuclear energy. Another State's identical subsidy would survive if the benefit of reducing hazards from nuclear power never entered the discussion. Whatever Congress intended to preempt in the Atomic Energy Act, it cannot have meant to do that.

2. *Collective motive is extraordinarily difficult for courts to discern.* Even putting aside the conceptual difficulties surrounding *collective* intent, inquiry into the subjective motives of even a single state official is usually "an unsatisfactory venture." *Pacific Gas*, 461 U.S. at 216. How will courts decide with any confidence what state lawmakers were thinking when they enacted the statute in this case *35 years ago*? What is the relevance, if any, of unsuccessful efforts to repeal that law that did not even come to a vote? Does the intent of those subsequent legislators count? What about the concerns of staffers, lobbyists, concerned citizens, and other interest groups? What significance should courts attach to legislators' public statements to the media or newspaper articles on the "realities of the legislative bargaining?" *Edwards*, 482 U.S. at 638 (Scalia, J., dissenting). Petitioners here rely on both. What about legislators' *private* statements to friends? Will the court consider "postenactment testimony from legislators, obtained expressly for the lawsuit?"

Id. "All of these sources, of course, are eminently manipulable. Legislative histories can be contrived and sanitized, favorable media coverage orchestrated, and postenactment recollections conveniently distorted." *Id.*

And if discerning federal legislative history were not difficult enough, adoption of petitioners' position would require federal judges "to por[e] through state legislative history—which may be less easily obtained, less thorough, and less familiar than its federal counterpart." *Shady Grove*, 559 U.S. at 405 (citing Roy M. Mersky & Donald J. Dunn, *Fundamentals of Legal Research* 233 (8th ed. 2002); Jose R. Torres & Steve Windsor, *State Legislative Histories: A Select, Annotated Bibliography*, 85 L. Lib. J. 545, 547 (1993)). All of these questions—or, rather, the fact that "there are no good answers," *Edwards*, 482 U.S. at 638 (Scalia, J., dissenting)—explain why the Court has generally avoided legislative-motive inquiries, and why it should do so here.[6]

C. Legislative-Intent Inquiries Raise Serious Federalism Problems

Turning preemption on legislative motive would also trample important state sovereignty interests.

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[6] For these reasons, scholars have argued that an improper motive should never, standing alone, invalidate a state law. *See* Laurence H. Tribe, *The Mystery of Motive, Private and Public: Some Notes Inspired by the Problems of Hate Crime and Animal Sacrifice*, 1993 Sup. Ct. Rev. 1, 23 (arguing that illicit legislative motive should never be sufficient to invalidate laws regulating conduct); Richard L. Hasen, *Bad Legislative Intent*, 2006 Wis. L. Rev. 843, 846 (proof of bad intent "should be neither necessary nor sufficient for an election law challenge to succeed"); Fallon, 130 Harv. L. Rev. at 529 ("[C]ourts should never invalidate legislation *solely* because of the subjective intentions of those who enacted it.").

"In preemption analysis," courts assume "that the historic police powers of the States are not superseded unless that was the clear and manifest purpose of Congress." *Arizona*, 567 U.S. at 400. An inquiry into legislative motive would harm the very state sovereignty interests that the presumption against preemption aims to protect.

A preemption inquiry into state motives "is perilous . . . not just for the judges who will very likely reach the wrong result, but also for the legislators who find that they must assess the validity of proposed legislation—and risk the condemnation of having voted for an unconstitutional measure—not on the basis of what the legislation contains, nor even on the basis of what they themselves intend, but on the basis of what *others* have in mind." *Edwards*, 482 U.S. at 638-39 (Scalia, J., dissenting). It would also create tremendous uncertainty about the power left to the States. (For this reason, *Shady Grove* stated that, rather than reshaping text to a federal court's conception of purpose, "the state-friendly approach [is] to accept the law *as written*." 559 U.S. at 404 (emphasis added).) Some questions that might daunt state legislators here: How much concern for radiological hazards is too much? Who has to express that concern, and in what contexts? If everyone who voted for a law had an independent, sufficient reason to pass it, has the State acted within the federal sphere or not? And is there any way to control whether a law runs into the federal field, when one legislator with permissible motives cannot control the motives or intentions of other legislators, commentators, or officials?

The natural result of such judicial inquiries will be to stifle debate. Democracy benefits from debate on public issues that is "uninhibited, robust, and wide-open." *New York Times Co. v. Sullivan*, 376 U.S. 254,

270 (1964). For that reason, and in accordance with the longstanding principle of legislative immunity, both the federal and numerous state constitutions (including Virginia's) have Speech and Debate Clauses to preclude judicial "question[ing]" of legislators for statements made or votes cast in legislative session. *See* U.S. Const. art. I, § 6, cl. 1; Va. Const. art. IV, § 9. A central purpose of such clauses is "to protect legislative independence." *United States v. Gillock*, 445 U.S. 360, 369 (1980); *accord Edwards v. Vesilind*, 790 S.E.2d 469, 476 (Va. 2016) (citing 4 William Holdsworth, *A History of English Law* 91 n.6 (1924)). But a motive-driven preemption rule would constrain state legislators in their deliberations. They would have the incentive to minimize public debate and to resort to secrecy and subterfuge, rather than risk stepping into federal territory by offering even tentative federal-field-related justifications for a proposed law.

Under the Atomic Energy Act specifically, the States would be highly constrained in regulating even those nuclear power-adjacent areas that Congress left to their judgment. It is extremely difficult to separate permissible motives—like environmental and economic concerns—from radiological safety issues. *See Entergy Nuclear Vermont Yankee, LLC v. Shumlin*, 733 F.3d 393, 437 (2d Cir. 2013) (Carney, J., concurring) ("[I]it seems impossible to divorce safety concerns from any State legislature's consideration of whether to allow, or continue to allow, the generation of nuclear power within its borders."). The infringement on deliberative freedom about even these traditional areas of state regulation intrudes upon core state prerogatives.

Then there are the severe practical burdens of responding to the judicial inquiry. In petitioners' vision, federal courts would have to charge forth,

ordering depositions of state legislators so that attorneys may perform the exact "questioning" that Speech and Debate Clauses preclude. Any responsible method of aggregating individual motives into a collective legislative intention would have to involve testimony from at least a substantial number of the legislators who voted for the law in question; it would need testimony from the governor who signed the law; perhaps it would need testimony from those who voted against the law, and from staffers, lobbyists, and commentators to provide context and give their own perceptions of what legislators' real motives were. Then, once all of those depositions are finished, if there is no picture clear enough for summary judgment, the same lawmakers would be haled into court to testify at trial—and be subject to cross-examination—about their subjective psychological motivations. One can imagine few more intrusive ways for federal courts to burden the daily operations of sovereign States.

And, it bears repeating, the entire invasive inquiry may well be for naught. After reviewing all of that testimony, documents from the time, lawmakers' public and private statements, and the views of commentators, staffers, and lobbyists, the court may *still* be unable to discern *any* unified motive behind the law, never mind a forbidden one. There is no reason to burden state sovereignty in this way when legislative motive is irrelevant to the Supremacy Clause analysis that suffices in every other area, when the inquiry is extremely unlikely to be enlightening, and—last but not least—when Congress still retains ample authority "to rethink the division of regulatory authority in light of its possible exercise by the States to undercut a federal objective." *Pacific Gas*, 461 U.S. at 223.

III. Neither The Atomic Energy Act Nor This Court's Cases Require A Motive Inquiry

Against all of that background about the peculiarity of, and the problems raised by, legislative-motive inquiries, neither the Atomic Energy Act nor this Court's cases applying it provide a reason to embark on one. As the Commonwealth's brief persuasively explains, 42 U.S.C. § 2021(k) does not preempt anything; § 2021 generally does not define the preempted field by reference to the purposes of state laws; and *Pacific Gas* and its progeny feature, at most, an effects-based preemption test along with dicta about state purposes and rationales. *See* Resp. Br. 21-33.

But even if the Court were to conclude otherwise, the phrase "for purposes other than protection against radiation hazards" in § 2021(k) should not be interpreted as requiring an inquiry into the *subjective* motivations of state legislators. Rather, "purposes" refers to the objective legislative purposes of the statute—an inquiry that courts are far better equipped to address than the fact-intensive motive inquiry petitioners would impose.

To the extent the Court concludes that subjective legislative motives *are* relevant, it should not preempt state laws unless the evidence demonstrates that the State lacked any non-safety rationale for its action.

A. *Pacific Gas* Performs, at Most, an Objective Purpose Inquiry

As noted above, *supra* Part I.B, the more recent "purpose" inquiries this Court has undertaken have been limited to the same universe of materials—and the same modes of analysis—that the Court uses in statutory interpretation. *See McCreary Cty.*, 545 U.S. at 861-62 ("The eyes that look to purpose belong to an 'objective observer,' one who takes account of the

traditional external signs that show up in the text, legislative history, and implementation of the statute,' or comparable official act."); *Board of Educ. v. Mergens*, 496 U.S. 226, 249 (1990) (plurality opinion) ("[W]hat is relevant is the legislative *purpose* of the statute, not the possibly religious *motives* of the legislators who enacted the law."). This is what Justice Scalia and others have articulated as an "objective purpose" inquiry. *Edwards*, 482 U.S. at 636 (Scalia, J., dissenting); Fallon, 130 Harv. L. Rev. at 541.

In this approach, as in statutory interpretation, "[t]he best evidence of [congressional] purpose is the statutory text." *West Virginia Univ. Hosps., Inc. v. Casey*, 499 U.S. 83, 98 (1991). As in statutory interpretation, courts may stop at the plain language and effects of the statutory text if the purpose and meaning of the law are clear. *See, e.g., United States v. Gonzales*, 520 U.S. 1, 6 (1997) ("Given the straightforward statutory command, there is no reason to resort to legislative history."). The inquiry does not demand discovery or taking evidence. And no litigant can "concede" the purpose of a statute; it is up to courts to discern purpose through their usual interpretive tools. *See Orloff v. Willoughby*, 345 U.S. 83, 87-88 (1953) (concessions on question of law do not bind courts).

If *Pacific Gas* did indeed consider statutory "purpose" as well as effects, that consideration was limited to objective purpose. The Court used the statutory text, the law's effects, and a committee report to determine that California had a valid economic purpose. Conspicuously absent was any deep-dive into the California legislature's subjective motivations. Indeed, the Court affirmatively eschewed the invitation to "become embroiled in attempting to ascertain California's true

motive." *Pacific Gas*, 461 U.S. at 216. Even assuming *Pacific Gas* considered purpose, it did not contemplate the subjective motive inquiry that petitioners demand.

B. Any Purpose or Motive Inquiry Should Be Closely Circumscribed

By carefully parsing this Court's decisions in *Pacific Gas* and *English*, the Commonwealth has shown that neither requires consideration of subjective motivation in this context. To the extent the Court reads those decisions differently, any motive-based inquiry must stop at the discovery of a permissible motive. This is the traditional, limited approach to legislative intent—which has prevailed throughout most of our nation's history—in which courts "typically refuse[] to impute impermissible purposes to a statute unless the available indicia effectively rule[] out any other conceivable explanation." Caleb Nelson, *Judicial Review of Legislative Purpose*, 83 N.Y.U. L. Rev. 1784, 1836 (2008); *see, e.g.*, *Shaw*, 509 U.S. at 642 (striking down a peculiarly shaped legislative district that was "so extremely irregular on its face that it rationally c[ould] be viewed only as an effort to segregate the races for purposes of voting"). It is also what the Court did in *Pacific Gas*.

Two principles mark the right path. First, there is no preemption unless nuclear safety is the *sole* motivation behind the state regulation. Second, courts must accept a State's proffered rationale unless it is implausible. In *Pacific Gas*, the Court considered "whether there is *a* nonsafety rationale" for the ban on nuclear construction. 461 U.S. at 213 (emphasis added). The Court "accept[ed] California's avowed economic purpose as the rationale for" its law. *Id.* at 216. And then, crucially, the Court's inquiry stopped.

Against the power company's cries for further investigation of California's legislative history and historical context, the Court explained that the venture would be "pointless" in light of the State's ability to reenact the same law for different reasons. *Id.*

A motive inquiry that follows these principles, though still inadvisable and unnecessary, avoids some of the toughest conceptual, practical, and federalism problems raised by a more searching review of legislators' mental processes. To survive a motion to dismiss under this standard, the complaint here must have alleged that Virginia lacked *any* non-safety rationale for its ban on uranium mining. Petitioners did not (and could not) so allege.

CONCLUSION

The judgment of the court of appeals should be affirmed.

Respectfully submitted,

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IN THE

Supreme Court of the United States

VIRGINIA URANIUM, INC., *et al.*,

Petitioners,

v.

JOHN WARREN, *et al.*,

Respondents.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT

BRIEF *AMICI CURIAE* OF THE ROANOKE RIVER BASIN ASSOCIATION, DAN RIVER BASIN ASSOCIATION AND PIEDMONT ENVIRONMENTAL COUNCIL IN SUPPORT OF RESPONDENTS

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INTEREST OF AMICI CURIAE[1]

Amici Roanoke River Basin Association, Dan River Basin Association, and Piedmont Environmental Council are 501(c)(3) nonprofit organizations dedicated to preserving and enhancing the resources of the areas they protect. Headwaters of the Roanoke River and the Dan River flow through the Coles Hill site in Pittsylvania County, Virginia, where petitioners propose to mine uranium. Amici have a strong interest in the ability of the Commonwealth of Virginia, in its sovereign capacity, to protect the environmental integrity and economic diversity of their region.

The Roanoke River flows 410 miles from the foothills of the Blue Ridge Mountains to the Albemarle Sound in North Carolina. The Roanoke River Basin economy depends on recreation and tourism, hydropower generation, commercial fishing, manufacturing, and agricultural production. Established in 1945, amicus Roanoke River Basin Association promotes those interests by representing local governments; regional governmental entities; nonprofit, civic, and community organizations; businesses; and individuals throughout the basin.

The Dan River stretches 214 miles from the eastern slope of the Blue Ridge to the Kerr Reservoir in southern Virginia, where it meets the Roanoke

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[1] The parties have filed letters with the Clerk indicating blanket consent to the filing of amicus briefs. No counsel for any party authored this brief in whole or in part, and no person or entity other than above-named amici curiae and their counsel made a monetary contribution intended to fund its preparation or submission.

River. Since 2002, amicus Dan River Basin Association has protected and promoted the natural and cultural resources of the Dan River Basin through education, stewardship of natural resources, and promoting outdoor recreation and tourism.

Amicus Piedmont Environmental Council was founded in 1972 to promote and protect the rural economy, natural resources, history, and beauty of the Piedmont region of central Virginia. The organization works directly with the citizens of nine counties in the northern Piedmont, and partners with local organizations to support thriving communities and healthy natural resources in areas throughout Virginia. In the early 1980s, based on its study of the potential impacts of uranium mining in Virginia, the Piedmont Environmental Council urged the adoption of a statewide moratorium, and has continued to educate state legislators, local governments, and communities on the issue since that time.

INTRODUCTION AND SUMMARY OF ARGUMENT

Petitioners attempt to make this case about assertedly ulterior motives of the Virginia legislators who, 35 years ago, enacted a moratorium on the mining of uranium within the Commonwealth, 1982 Va. Acts 426 (Pet. App. 170a–177a); *see* Va. Code § 45.1-283 (Pet. App. 176a); 1983 Va. Acts 3, art. 1, codified at Va. Code § 45.1-283 (Pet. App. 177a–178a)—and the post-enactment motives of succeeding legislators, working group members, and private citizens. But *Congress's* intentions, as reflected in the text and structure of the Atomic Energy Act, 42 U.S.C. §§ 2011 *et seq.* (AEA or Act), should dispose of the case. The AEA's text, structure and history make

clear that it does not preempt Virginia's statutory moratorium.

Mining on private land is a traditional area of state regulation, bearing on fundamental choices about the sometimes incompatible uses to which land can be put and implicating States' core responsibilities to protect residents' health and the local environment. Because mining on private land is an issue that has been traditionally subject to state regulation (indeed, for most of the country's history, exclusively so), petitioners must show that preemption of state law was Congress's "clear and manifest purpose." *Wyeth v. Levine*, 555 U.S. 555, 565 (2009).

Petitioners are unable to identify any statutory text that plausibly supports their preemption theory, and the statutory text that exists refutes it. While the Act sets forth a comprehensive regime of federal regulation of processing, transport, use, and disposal of nuclear material, that regime begins only "*after [the material's] removal* from its place of deposit in nature." 42 U.S.C § 2092. Indeed, even the original version of the AEA, which contemplated a federal monopoly over nuclear development, did not regulate uranium mining on nonfederal land or purport to limit state authority over that activity.

Congress's choice to leave regulation of uranium mining in state hands does not frustrate the development of nuclear power. The AEA enables the federal government to ensure development of uranium ore or other source materials on federal and nonfederal land. The Nuclear Regulatory Commission (NRC) has express authority under the statute, "to the extent it deems necessary to effectuate the

provisions of this [Act]," to issue "permits for prospecting for, exploration for, mining of, or removal of deposits of source material in lands belonging to the United States, *id.* § 2097, and is given broad authority—again, when the Commission "deems" it necessary to effectuate the Act—"to purchase, condemn, or otherwise acquire any interest in real property containing deposits of source material," *id.* § 2096(b). Thus the Act, as written by Congress, ensures that its purposes may be effectuated without preempting the States' role— and without judicial intervention.

No language in the Act qualifies States' authority to regulate uranium mining, or limits the purposes for which they may do so. Petitioners misplace reliance upon a provision that affirms state authority to regulate "activities" under NRC oversight, so long as the States regulate "for purposes other than protection against radiation hazards." 42 U.S.C. § 2021(k). That provision merely confirms States' ability to regulate "activities" regulated by the NRC, while preserving federal control over radiological safety matters. It does not speak to uranium mining on private land, which has never been regulated under the AEA.

And none of this Court's AEA cases supports limiting state authority to regulate or ban uranium mining, a matter that has always been beyond the AEA's reach. The rule petitioners seek would not only scramble the AEA's carefully drawn jurisdictional lines; it would also place uranium mining—a particularly harmful and disruptive land use—outside the direct regulatory authority of both state *and* federal government.

Virginia and other States reasonably have chosen to closely regulate or prohibit uranium mining in light of its significant impacts on local resources and communities. Congress clearly left that choice to the States, consistent with our constitutional system of federalism.

BACKGROUND

A. Pittsylvania County

The gently rolling hills of Pittsylvania County, Virginia—the site of petitioners' proposed uranium mine—are home to more than 60,000 people. Six miles from the Coles Hill site, Chatham, the county seat, is home to a noteworthy historic district and two boarding schools.

Figure 1. Pittsylvania County (2011)

Residents rely heavily on the county's natural resources for their health and livelihood. Agriculture is a leading economic sector, with more than 1,300

active farms producing crops, livestock, poultry, and dairy products.[2] Nearly three-quarters of residents rely on private wells for their drinking water.[3]

Pittsylvania County is also the heart of the Roanoke River watershed, which supplies drinking water for the coastal cities of Norfolk, Virginia Beach, and Chesapeake, Virginia.[4] The Commonwealth has designated over 50 miles of the Roanoke River immediately east of Pittsylvania County as a State Scenic River, in recognition of its natural beauty and recreational and historic significance. Va. Code §§ 10.1-418, 10.1-401(A)(1). The County's rivers, lakes, and streams also support hunting, fishing, and water sports as both popular recreational activities and generators of tourism revenue.

Pittsylvania County has a humid subtropical climate,[5] with annual precipitation averaging more

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[2] U.S. Dep't of Agric., 2012 Census of Agriculture, County Profile: Pittsylvania County, Virginia (May 2014), http://www.agcensus.usda.gov/Publications/2012/Online_Resources/County_Profiles/Virginia/cp51143.pdf.

[3] U.S. Geological Survey, Water Use Data for Virginia (June 2018), http://tinyurl.com/ybyl28kc (estimating county's 2015 population as 62,194), http://tinyurl.com/y7l7nxhx (estimating that, as of 2015, public water supply served 16,789 residents).

[4] City of Virginia Beach, Policy Report: Uranium Mining in the Roanoke River Basin 2 (2008), http://www.vbgov.com/government/departments/public-utilities/Documents/14.VABeach_Uranium_Mining_Policy_Report.pdf.

[5] Nat'l Research Council, Uranium Mining in Virginia: Scientific, Technical, Environmental, Human Health and Safety, and Regulatory Aspects of Uranium Mining and Processing in Virginia 40 (2012) ("NAS Report"), http://doi.org/10.17226/13266. This peer-reviewed report by the National Academy of Sciences ("NAS") was the culmination of a

than 43 inches per year.[6] Virginia is also subject to seismic activity and to extreme weather events, including tornadoes,[7] hurricanes, tropical storms, and heavy rainfall.[8]

B. Uranium Mining

There are two conventional methods for removing uranium from the ground: open-pit mining and underground mining. Both methods have been used in the arid western United States,[9] where the climate and population density differ significantly from that of Virginia. No open-pit or underground uranium mines are currently operating anywhere in the United States.[10]

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multi-year examination of "the scientific, technical, environmental, human health and safety, and regulatory aspects of uranium mining, milling, and processing as they relate to the Commonwealth of Virginia . . . ." *Id.* at 32.

[6] Southeast Reg'l Climate Ctr., *Chatham, Virginia (441614): Period of Record Monthly Climate Summary* (2012), http://www.sercc.com/cgi-bin/sercc/cliMAIN.pl?va1614.

[7] Va. Dep't of Emergency Mgmt., History: Virginia Tornadoes (updated Aug. 2016), http://www.vaemergency.gov/news-local/tornado-history.

[8] NAS Report at 40-41. In August 2011, a 5.8-magnitude earthquake struck Virginia, with its epicenter near Mineral, Virginia, roughly 125 miles from the proposed site. *Id.* at 40.

[9] 5 Special Waste Branch, U.S. Envtl. Prot. Agency, EPA 530-R-94-032, Technical Resource Document, Extraction and Beneficiation of Ores and Minerals 4 (Jan. 1995) ("EPA Technical Resource Document"), http://archive.epa.gov/epawaste/nonhaz/industrial/special/web/pdf/uranium.pdf.

[10] U.S. Energy Info. Admin., 2017 Domestic Uranium Production Report 10 tbl. 2 (May 2018) ("2017 Domestic Uranium Production"), http://www.eia.gov/uranium/production/

In open pit mining, topsoil and rock overburden are removed from the site using explosives or bulldozers, mechanical shovels, and other heavy equipment. EPA Technical Resource Document, *supra* note 9, at 16. The exposed uranium ore is then removed and trucked to an on-site stockpile. *Id.* Non-ore bearing material and overburden are discarded in waste rock piles on-site. *Id.*[11]

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annual/pdf/dupr.pdf. There are six mines currently in operation in the United States that extract uranium using a process known as in situ leaching. *Id.* Petitioners do not deny that this process is infeasible in Virginia. *See* Pet. App. 22a n.2 (Traxler, J., dissenting).

[11] Waste rock is rock or ore that has been mined but is not of sufficient value to warrant milling. 1 Radiation Prot. Div., U.S. Envtl. Prot. Agency, EPA 402-R-08-005, Technical Report on Technologically Enhanced Naturally Occurring Radioactive Materials from Uranium Mining 1-4 n.5 (Apr. 2008) ("TENORM Report"), http://www.epa.gov/sites/production/files/2015-05/documents/402-r-08-005-v1.pdf.

Figure 2. Open-pit uranium mine, Northern Territory, Australia (1990)

In underground mining, the operator sinks a shaft near the ore body and develops tunnels from the shaft at various depths to access and remove the ore. EPA Technical Resource Document, *supra* note 9, at 16. After explosives are detonated to fragment the ore body, ore and waste rock are removed through shaft conveyances or chutes and hoisted to the surface, with the waste rock again discarded on-site. *See id.* at 16-17; NAS Report, *supra* note 5, at 106.

Once extracted, uranium ore is transferred to a mill, where it undergoes a series of physical and chemical processes that separate the ore from the rock and convert the ore into concentrated uranium oxide, or "yellowcake." *See* EPA Technical Resource Document, *supra* note 9, at 4, 17. Wastes from the milling process, known as "tailings," are pumped in slurry form to on-site impoundments. *Id.* at 23.

Because the uranium content of the raw ore is typically only a fraction of one percent,[12] the mining process produces an extremely high volume of waste material—material that is both radioactive and chemically reactive. *See* TENORM Report, *supra* note 11, at 2-7; NAS Report, *supra* note 5, at 192. Water that collects in mine workings must also be pumped out—a process known as "dewatering"—and then may be treated and discharged directly into surface waters. EPA Technical Resource Document, *supra* note 9, at 33-34.

C. Effects of Uranium Mining on Human Health and the Environment

Independent of the radiological safety concerns associated with uranium milling and tailings management—which occur *after* the extraction of uranium ore from the ground—the mining process presents its own set of serious risks to human health and the environment, due to the presence of radiological and non-radiological chemicals in ore deposits, mine water, and waste rock. *See* NAS Report, *supra* note 5, at 205, 209-10.

1. Human Health Effects

The most notorious health effects of uranium mining itself are associated with its radiological character. Numerous studies of uranium miners have found significant increases in the occurrence of respiratory tract cancer, predominantly lung cancer, due to high levels of radon and radon decay products

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[12] Worldwide, most uranium deposits have a uranium concentration of 0.05 to 0.5 percent. NAS Report at 111.

in underground uranium mines.[13] Members of the public living in the vicinity of uranium mines are also at increased risk of radiation exposure from atmospheric deposition of fugitive ore dust, ventilation of toxic exhaust from underground mine shafts, contamination of water supplies, and uncontrolled releases of radioactive materials as a result of extreme events such as floods and earthquakes. *See* NAS Report, *supra* note 5, at 176; EPA Technical Resource Document, *supra* note 9, at 43.

The human health risks from uranium mining are not traceable to radioactivity alone. Mine workers face increased rates of lung cancer and other respiratory disorders due to inhalation of silica dust and diesel emissions from mining operations. NAS Report, *supra* note 5, at 156-57, 162-64. Particulate matter generated from the disturbance of rock and soil, bulldozing, blasting, and vehicular travel can lead to higher rates of asthma in the surrounding community. *Id.* at 202-03.

2. Environmental Effects

a. Surface water quality and quantity. Mining activities—disturbance of land, temporary storage of ores and mining wastes, dewatering of mine workings, and reclamation activities—all have the potential to significantly increase the concentrations

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[13] Agency for Toxic Substances & Disease Registry, Toxicological Profile for Uranium 17 (Feb. 2013), http://www.atsdr.cdc.gov/toxprofiles/tp150.pdf; *see also Begay v. United States*, 591 F. Supp. 991, 1006 (D. Ariz. 1984) (finding direct relationship between underground uranium miners' radiation exposure and heightened incidence of respiratory tract and lung cancer).

and loads of substances in surface water that impair water quality, including phosphorus, nitrate, metals, metalloids, sediment, and strong acidity. NAS Report, *supra* note 5, at 181, 193. In particular, a process known as acid mine drainage—caused when water flows over or through sulfur-bearing ore—produces an acidic solution containing toxic heavy metals, which can then run off into surface waters. *See id.* at 181-84; *id.* at 181 (problems with acid mine drainage "are nearly ubiquitous . . . for uranium mines around the world").

Mining also affects the *quantity* of surface water in various ways. Compared to unmined, forested land, areas disturbed by surface mining experience increased surface runoff on-site, which increases stream discharges in downstream waters. NAS Report, *supra* note 5, at 194. Underground mining can increase flows to downstream waters (due to discharge from dewatering) or decrease on-site flows (due to blasting of rock). *Id.*

b. Groundwater quality and quantity. By artificially introducing oxygen into the subsurface and connecting separate aquifers, underground exploration and mining can form acid mine drainage and enhance the solubility and mobility of contaminants in groundwater. NAS Report, *supra* note 5, at 196-97. Lowering the water table to access ore bodies lying beneath the water table can also lower groundwater levels in surrounding wells, potentially causing them to run dry and forcing affected households to find alternate sources of water. *Id.* at 199.

c. Soil and ecological effects. Activities associated with mining generally—including ground

disturbance, emissions from vehicles and construction equipment, and increased human presence—have a number of detrimental effects on the surrounding environment. The removal of soil and overburden causes the loss of porosity and permeability, decreases moisture for plant growth, accelerates erosion, and leads to the loss of organisms, organic matter, and nitrogen vital to healthy soils. NAS Report, *supra* note 5, at 201. The elimination of soil habitat and woodlands, in turn, has long-term ecological effects. *See id.* at 214. And the presence of chemicals in uranium mine water and waste that are toxic to animal and plant life—including dissolved salts, acidity, selenium, copper, aluminum, vanadium, and iron—means that uranium mining poses ecological risks beyond typical mining operations. *See id.* at 205, 209-10, 211-12.

Modern safety practices can reduce, but do not eliminate, the environmental hazards historically associated with uranium mines. Even state-of-the-art uranium mines have experienced acid mine drainage from waste rock piles and adverse effects on aquatic biota from contaminants in treated effluent. *Id.* at 221.

D. Economic Effects of Dependence on Uranium Mining

Pittsylvania County's economy relies on a variety of relatively stable industries, including agriculture, manufacturing, health care, and education.[14] In

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[14] Terance J. Rephann et al., *Growing Agribusiness: The Contribution and Development Potential of Agriculture and Forest Industry in the Danville Metropolitan Area* 8-9 (Feb.

contrast, mineral commodity markets tend to be cyclical, and the market for uranium is particularly susceptible to booms and busts. Uranium prices skyrocketed in the 1970s, plummeted in the 1980s and 1990s, then rebounded in the mid-2000s, only to decline steeply again. *See* NAS Report, *supra* note 5, at 93 fig. 3.22. Domestic production peaked in 1980 at nearly 44 million pounds of uranium concentrate, before falling to just over 3 million pounds in 1993.[15] With the price of uranium concentrate remaining low, domestic uranium production sits at 1.2 million pounds today. 2017 Domestic Uranium Production, *supra* note 10, at 16 tbl. 9. Given this instability, uranium mining may do more harm than good for a local economy.

ARGUMENT

"[T]he purpose of Congress is the ultimate touchstone in every pre-emption case." *Hughes v. Talen Energy Mktg., LLC*, 136 S. Ct. 1288, 1297 (2016) (citation and quotation marks omitted). In such a case, the Court asks whether "Congress, in enacting the Federal Statute, intend[ed] to exercise its constitutionally delegated authority to set aside the laws of a State[.]" *Barnett Bank of Marion Cty., N.A. v. Nelson*, 517 U.S. 25, 30 (1996).

Like limits on uranium mining that other States have imposed, Virginia's moratorium reflects the Commonwealth's reasonable judgment that uranium

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2013), http://ceps.coopercenter.org/sites/ceps/files/PittDanville_agbusiness_final.pdf.

[15] U.S. Energy Info. Admin., Annual Energy Review 2011, at 275 (Sept. 2012), http://www.eia.gov/totalenergy/data/annual/pdf/aer.pdf.

mining could harm the "health, safety, and general welfare" of its residents, Act of Apr. 7, 1982, ch. 269, 1982 Va. Acts 426 (Pet. App. 170a), and could impair the state and regional economy. That is a judgment Congress, in the AEA, plainly left to Virginia to make.

Because mining on private land is a matter of traditional police power and land-use regulation, only a clear signal from Congress could displace state power in this area. The AEA not only lacks a clear signal that Congress preempted state uranium mining prohibitions; it clearly and manifestly leaves such decisions to the States. AEA regulation commences only "after" source material's *"removal* from its place of deposit in nature," 42 U.S.C § 2092 (emphasis added), and when that place of deposit is private land, eminent domain is the sole means by which the resource may be brought within the ambit of the AEA.

The AEA does not cabin the States' discretion in exercising their traditional land use authority, and it provides no warrant for federal courts to second-guess the motivations of States exercising that authority.

I. State Regulation of Uranium Mining on Private Land Is a Quintessential Exercise of Police Power That Cannot Be Preempted Absent Clear and Manifest Congressional Intent

When Congress legislates in a field "traditionally occupied" by States, courts assume that the "historic police powers of the States [are not] superseded . . . unless that was the clear and manifest purpose of Congress." *Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218, 230 (1947); *see Wyeth*, 555 U.S. at 565. Because

mining on private land is an "area[] of traditional state regulation," *Bates v. Dow Agrosciences LLC*, 544 U.S. 431, 449 (2005); *see City of Columbus v. Ours Garage & Wrecker Serv., Inc.*, 536 U.S. 424, 432-33 (2002); *Medtronic, Inc. v. Lohr*, 518 U.S. 470, 485 (1996), and given the undisputed absence here of an express preemption clause, *cf. Puerto Rico v. Franklin Cal. Tax-Free Trust*, 136 S. Ct. 1938, 1946 (2016), the presumption against preemption of "traditional" state authority over local land use applies with full force. Mining on private land implicates core police power concerns for public health, environmental quality, and aesthetics. That is certainly true of uranium mining, which poses both radiological and non-radiological risks for nearby residents and water supplies, and harms natural resources and aesthetic values. *See* pp. 10-13, *supra*.

Regulation of mining on private land lies at the core of a State's police powers, implicating "the public interest in health, the environment, and the fiscal integrity of the area[] under its jurisdiction]." *Keystone Bituminous Coal Ass'n v. DeBenedictis*, 480 U.S. 470, 488 (1987). It is a form of regulation of local land use, "perhaps the quintessential state activity," *FERC v. Mississippi*, 456 U.S. 742, 768 n.30 (1982); *see Hess v. Port Auth. Trans-Hudson Corp.*, 513 U.S. 30, 44 (1994); *Warth v. Seldin*, 422 U.S. 490, 508 n.18 (1975). *See also Solid Waste Agency of N. Cook Cty. v. U.S. Army Corps of Eng'rs*, 531 U.S. 159, 172-73 (2001) (construing federal statute to avoid interpretation that would raise constitutional questions because of intrusion on States' traditional authority over local land use).

Until well into the twentieth century, mining activity on private land was generally regarded as beyond Congress's constitutional power to regulate. *See Carter v. Carter Coal Co.*, 298 U.S. 238, 304 (1936) ("Mining brings the subject-matter of commerce into existence. Commerce disposes of it."); *United Mine Workers of Am. v. Coronado Coal Co.*, 259 U.S. 344, 407 (1922) ("Coal mining is not interstate commerce, and the power of Congress does not extend to its regulation as such."); *Kidd v. Pearson*, 128 U.S. 1, 21 (1888) (including "mining" among the "interests which in their nature are, and must be, local in all the details of their successful management").

In eastern States, federal land is relatively scarce, and state common and statutory laws have long governed all aspects of mining. "The individual states comprised within this group, being the paramount proprietors of their mineral lands, could alone prescribe the terms upon which mining rights could be acquired thereon." 1 Curtis H. Lindley, *The American Law Relating to Mines and Mineral Lands* § 19 (3d ed. 1914).[16]

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[16] The understanding that States had broad police power concerning mining informed the law applicable to mining on the vast quantities of public land in western states. *See Woodruff v. N. Bloomfield Gravel Mining Co.*, 18 F. 753, 806-09 (C.C.D. Cal. 1884) (enjoining as nuisance the practice of hydraulic mining); *Hicks v. Bell*, 3 Cal. 219, 227 (Cal. 1853). Even when addressing mining on federal land, Congress has preserved an important role for state and local regulation. *See* 30 U.S.C. § 22 (General Mining Law provision requiring compliance with all state and local laws "not inconsistent with" federal law); *Cal. Coastal Comm'n v. Granite Rock Co.*, 480 U.S. 572, 581-82, 587 (1987); *United States v. Shumway*, 199 F.3d 1093, 1097-98 (9th Cir. 1999).

American mining law was in large part developed in common law adjudication,[17] but state legislatures and administrative agencies also played important roles, "[p]articularly [in] those [places] where coal mining is carried on extensively." Lindley § 19. More than a century ago, those States had developed "elaborate systems in the nature of police regulations, prescribing the manner in which mines shall be worked, providing for their official inspection, proper ventilation, means of escape in case of accident, and provisions looking to the protection of the miners." *Id.*

Although Virginia was not a pioneer in mining legislation, *see* Lindley § 19, the Commonwealth adopted its first general legislation on mining more than fifty years ago. From 1966 to 1979, Virginia issued permits for coal mines under its own laws. Va. Code §§ 45.162 to -179 (1966); *id.* §§ 45.198 to -220.5 (1972). In 1979, Virginia assumed primary responsibility for the implementation of the Surface Mining Control and Reclamation Act of 1977 (SMCRA), 30 U.S.C. §§ 1201 *et seq.*, at all coal mines

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[17] *See, e.g., Brush v. Lehigh Valley Coal Co.*, 138 A. 860, 862 (Pa. 1927) (finding that contractual release precluded plaintiff's otherwise viable tort claim for pollution of stream); *Continental Coal Co. v. Connellsville By-Product Coal Co.*, 138 S.E. 737 (W. Va. 1927) (reversing injunction against operation of mine alleged to interfere with operation or safety of adjacent mine); *Mahon v. Pa. Coal Co.*, 118 A. 491, 494 (Pa. 1922) (discussing Pennsylvania common law principles governing mining, including rules regarding lateral support of adjacent land), rev'd on other grounds, 260 U.S. 393 (1922); *Keppel v. Lehigh Coal & Navigation Co.*, 50 A. 302, 303 (Pa. 1901) (upholding nuisance judgment against owner of coal mine that polluted stream, impairing operation of flour mill). *See also Kellyville Coal Co. v. Strine*, 75 N.E. 375, 379 (Ill. 1905) (interpreting provision of state constitution addressed to mine safety).

within its borders. Virginia Coal Surface Mining and Reclamation Act, 1979 Va. Acts ch. 290, codified at Va. Code §§ 45.1-226 to -270. The Commonwealth currently regulates coal and mineral mining (the latter of which is not subject to SMCRA) pursuant to Va. Code § 45.1-161.1 *et seq.*

Although Virginia is under no special obligation to explain its decision to ban uranium mining while permitting (subject to regulation) other forms of mining, there is nothing anomalous about its approach. Iron and coal mining in Virginia predate the Republic—bog iron ore was mined near Jamestown in the 1600s, and mining of the Richmond coalfield began in the 1700s.[18] This lengthy history, beginning long before the environmental and health effects of mining were widely understood, shaped patterns of settlement, economic activity, and public and private investment that are now centuries old. In contrast, uranium mining has never occurred in Virginia, has been prohibited by law for 36 years, and is proposed to occur in an area whose economy developed, and remains organized around, very different land and resource uses.

Regulation of industrial production is, of course, no longer considered beyond Congress's power. *See NLRB v. Jones & Laughlin Steel Corp.*, 301 U.S. 1 (1937); *Hodel v. Va. Surface Mining & Reclamation Ass'n*, 452 U.S. 264 (1981). But even when it has exercised its powers under a broadened reading of the Commerce Clause, Congress has in key respects

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[18] Va. Dep't of Mines, Minerals & Energy, *Historic Mining in Virginia* (2015), http://www.dmme.virginia.gov/dmm/historicmining.shtml.

affirmed States' traditional, far-reaching authority over mining. In enacting SMCRA, "a nationwide program to protect society and the environment from the adverse effects of surface coal mining operations," 30 U.S.C. § 1202(a), Congress expressly preserved States' authority to adopt "more stringent land use controls and regulations of surface coal mining and reclamation," *id.* § 1255(b).

II. The AEA Does Not Regulate Conventional Uranium Mining on Nonfederal Land or Displace Traditional State Authority Over Such Mining

The AEA itself disposes of petitioners' preemption claim. Petitioners have no plausible textual basis for their claim that state regulation of uranium mining is preempted—and the statutory text and structure powerfully refute the argument that Congress *implicitly* preempted state regulation. Instead, Congress deliberately chose to leave the regulation of uranium mining on nonfederal land entirely to state and local authorities, granting the NRC non-regulatory (and non-preemptive) powers to ensure an adequate supply of source materials where the NRC deems it necessary to effectuate the AEA's purposes—which it has not done here.

The AEA's text, structure, and history indicate a deliberate congressional choice, unchanged since the statute was enacted in 1946, to leave to States their traditional authority over all aspects of mining on nonfederal land. Honoring this choice requires rejecting petitioners' creative efforts to find some theory by which preemption could be justified despite (1) the lack of any supporting statutory text, and (2)

pointed indices that Congress affirmatively left the matter to state control and found other means of ensuring sufficient quantities of source material to effectuate the Act's purposes

The AEA gives the NRC "exclusive jurisdiction to license the transfer, delivery, receipt, acquisition, possession and use of nuclear materials." *Pacific Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 207 (1983) (*Pacific Gas*). The NRC is directed to administer an exclusive regime of licensing and regulatory oversight for the safe handling and disposal of nuclear materials. But the AEA's extensive scheme of federal regulation of nuclear materials applies only to activities occurring *"after"* the material's *"removal* from its place of deposit in nature." 42 U.S.C § 2092 (emphasis added).[19]

Congress chose not to apply the AEA's regime of federal standard-setting and licensing to mining uranium on nonfederal land. The decision to respect States' traditional authority was no accidental oversight: Mining is expressly addressed under the AEA, in a provision giving the Commission authority to issue permits for mining of source material in "lands belonging to the United States." 42 U.S.C. § 2097. The AEA also provides the NRC with non-regulatory means to obtain supplies of uranium and other nuclear source materials still "deposit[ed] in nature" on non-federal land, namely, through negotiated purchase or condemnation. The statute

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[19] As noted above, *supra* p. 20, even in regulating surface mining of coal in SMCRA, Congress expressly left intact States' authority to enact more stringent environmental protections.

authorizes the Commission, "to the extent it deems necessary to effectuate" the AEA, "to purchase, condemn, or otherwise acquire any interest in real property containing deposits of source material," *id.* § 2097(b), and also to likewise "acquire rights to enter upon any real property deemed by the Commission to have possibilities of containing deposits of source material in order to conduct prospecting and exploratory operations," *id.* § 2097(c). These provisions for exploring and acquiring land containing uranium or other source material reinforce and complement Congress's choice to leave undiminished States' power to regulate uranium mining on nonfederal land.

No provision of the statute authorizes the NRC to regulate—whether by prescribing standards, requiring a license, or otherwise—mining uranium on nonfederal land. Petitioners and the United States concede this point. *See* Pet. Br. 27 (recognizing that the "*mining* of uranium" is "an activity the NRC does not regulate") (emphasis in original); U.S. Br. 14 ("uranium mining . . . is outside [NRC] jurisdiction"); U.S. Cert. Br. 18 (acknowledging that "States retain the authority to regulate conventional uranium mining" or "to prohibit it altogether"); *see also* Pet. App. 12a (court of appeals' reference to the NRC's conclusion that it "lacks the power to regulate" conventional uranium mining on nonfederal land); Resp. Br. 9 (citing longstanding NRC precedent to that effect).

In this carefully crafted, repeatedly amended statute, *see, e.g.*, *English v. Gen. Elec. Co.*, 496 U.S. 72, 81-82 (1990); *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 250-51 (1984), Congress has not included

any language that even arguably preempts state regulation of uranium mining on nonfederal land.

III. Subsection 2021(k) Does Not Operate to Preempt State Regulations Concerning Uranium Mining on Private Land

Lacking any statutory language speaking directly to preemption of state mining regulation, petitioners rely heavily on 42 U.S.C. § 2021(k), to which petitioners impute a powerful, free-floating preemptive force that "controls" this case. Pet. Br. 33.

Subsection 2021(k) cannot bear that interpretation. It is a *non-preemption clause* in a provision designed to return to the States authority over nuclear activities that had previously been a federal monopoly. *See Pacific Gas*, 461 U.S. at 206-09. By its terms, it *preserves* state authority, clarifying that "[n]othing in [Section 2021]" affects States' authority "to regulate activities for purposes other than protection against radiation hazards." 42 U.S.C. § 2021(k). Section 2021 addresses various activities subject to regulation by the Commission, including the "construction or operation" of any "production or utilization facility or any uranium enrichment facility," the export or import of nuclear material; or certain forms of disposal of nuclear materials, 42 U.S.C. § 2021(c). Subsection 2021(k) provides that the Act does not preclude state regulation of *those activities* so long as the State is not regulating for the purpose of protecting against radiation hazards. As this Court explained in *Pacific Gas*, Subsection 2021(k) confirms that Section 2021 was "not intended to cutback on preexisting state authority outside the NRC's jurisdiction," and underscores "the distinction drawn in [the AEA] between the spheres of activity

left respectively to the federal government and the states." 461 U.S. at 209-10.

Neither *Pacific Gas*, nor any other of this Court's AEA preemption decisions, nor its general preemption jurisprudence supports the notion that the Subsection 2021(k) savings clause operates to preempt state laws protecting against radiation hazards of activities that are not and cannot be regulated by the NRC under the AEA. Indeed, state laws that protect against radiation hazards are many and cover a broad sweep, concerning, for example, radon gas contamination of buildings, *e.g.*, 29 Fla. Stat. § 404.056; the inspection of x-ray equipment in medical offices, *e.g.*, Tex. Health & Safety Code Ann. § 401.064; the introduction of radioactive wastes in sewers, *e.g.*, 70 Ill. Comp. Stat. 2405/18(d); and criminal prohibitions on the use of radioactive substances to poison others, *e.g.*, Ohio Rev. Code Ann. § 2927.24. Such laws are manifestly grounded on concerns about radiation, but they are not preempted by the AEA because the distinction Subsection 2021(k) draws between permitted (non-radiation-based) and preempted (radiation-based) state regulation applies only to the universe of "activities" subject to AEA regulation. Uranium mining is not one of those activities.

Subsection 2021(k) does not address activities that the AEA does not regulate. And it surely does not establish a bizarre blinkering requirement, such that, in exercising their sovereign authority to regulate uranium mining on nonfederal land, States may not consider the radiation hazards associated with such mining for workers, local residents, visitors, and

natural resources—or the potential effects of such hazards on the local economy.

IV. Preemption of State Authority Over Nonfederal Uranium Mining Would Open a Harmful Regulatory Void That Congress Manifestly Did Not Intend to Create

Petitioners' proposed preemption regime would have striking and dramatic implications for States (and for public safety), by requiring States to allow uranium mining to take place despite their own contrary judgments about the activity's burdens and benefits—and despite the absence of any federal regime directly regulating that activity's substantial health, environmental, and economic effects. Petitioners' theory places States and their residents in a regulatory limbo, where neither the NRC nor the States themselves have clear authority to protect against radiological hazards associated with uranium mining.

That result is at least as contrary to congressional intent as the one this Court rejected in *Pacific Gas*. In concluding that the AEA did not preempt state public utility regulation of nuclear power generators, the Court there recognized as "almost inconceivable" that Congress "would have left a regulatory vacuum." 461 U.S. at 207-08. Here, as in that case, "the only reasonable inference is that Congress intended the states to continue to make these judgments."[20]

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[20] To be sure, Congress sometimes does choose to preempt state law without providing a substitute federal regulation based on a decision to rely on unfettered market forces. *See Morales v. Trans World Airlines, Inc.*, 504 U.S. 374, 384 (1992). But there

Petitioners' argument would require States confronted with requests to allow uranium mining within their borders to affirmatively license activity against their better judgment or else leave entirely unregulated activity that may have serious adverse implications for public health, the environment, and the local economy. That unpalatable choice is redolent of the requirement, held unconstitutional in *New York v. United States*, 505 U.S. 144 (1992), that a State either regulate according to congressional wishes or "take title" to nuclear waste.

But no such extreme impositions are presented here, because there is no sign Congress intended to put Virginia and other States in that position. Rather, the AEA's clear intent is that States retain their preexisting, plenary authority to regulate (including, where they so choose, to prohibit) mining on nonfederal land within their borders.

V. The Courts Below Properly Rejected Petitioners' Attempt to Void Virginia's *Mining* Statute as an Impermissible Milling Regulation

The Court should reject petitioners' effort to transform Congress's partial preemption of state regulations of *subsequent* phases of the process of nuclear development—those the AEA subjects to federal licensing and oversight—into a different regime, unmoored from the statute, in which plaintiffs may challenge state regulations of mining on nonfederal land. As an initial matter, petitioners provide no persuasive reason to think Virginia was

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is no indication that Congress intended to create such a regime with regard to uranium mining.

not motivated principally by concerns about the impacts of uranium mining itself. *See English*, 496 U.S. at 83 (in case involving state common law claim addressing AEA-regulated activity, looking to relevant common law's "'paramount' purpose") (quoting district court). This Court's AEA precedent cuts strongly against petitioners' demand federal courts plumb for claimed hidden motives behind state regulations in areas Congress has left to state regulation. *See Pacific Gas*, 461 U.S. at 216 (disclaiming an "attempt[] to ascertain California's true motive" for regulating economic aspects of nuclear power plant). The Virginia General Assembly was concerned with what it actually regulated—uranium *mining*—and there is no basis for this Court to conclude otherwise. *See Shady Grove Orthopedic Assocs., P.A. v. Allstate Ins. Co.*, 559 U.S. 393, 403-05 (2010) (urging that state law should be judged "as written" rather than based upon an assessment of the "subjective intentions of the state legislature").

More fundamentally, however, petitioners' argument is incompatible with Congress's decision in the AEA to exclude from the Act's regime of federal regulation uranium mining on nonfederal land. Judicial fact-finding in search of impermissible legislative motives is not only likely to be inefficient and highly uncertain; it also disregards the bright line Congress has clearly and consistently drawn in the AEA between state and federal roles. Congress's decision to leave regulation of mining on nonfederal land to the States should be dispositive of this case. The plain (and sole) object of the Virginia statute at issue here is mining itself. And as set forth above, *see* pp. 10-15, *supra*, given the potential human health, environmental, and economic impacts associated with

the types of uranium mining petitioners seek to pursue, Virginia had ample reason to exercise its authority in this area.

In the absence of clear congressional intent to preempt, totally absent here, courts should not disturb a State's judgment that the considerable impacts of uranium mining are incompatible with diverse and largely agricultural local economies like that of Pittsylvania County. Nor is Virginia's judgment unique among the States. For over thirty years, Maine, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, and Vermont have similarly imposed severe restrictions or outright bans on uranium mining.[21]

Unlike with the activities the Act subjects to NRC regulation, Congress did not prescribe, or invite federal courts or the NRC to police, the reasons why a State regulates uranium mining. If the mining ban here is subject to intrusive scrutiny from a federal court based upon allegations of improper, ulterior motives, then Congress's decision to respect traditional state authority would mean little. Congress readily could have provided that state regulation of mining on nonfederal land is proper only

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[21] Me. Stat. tit. 11, § 489-B (prohibiting mining); N.H. Rev. Stat. Ann. § 125-F:1 (declaring public policy of State to prohibit uranium mining); N.J. Stat. Ann. § 13:1J-3 (prohibiting mining, milling, and processing); N.Y. Envtl. Conserv. Laws Ann. § 22-1070 (prohibiting mining); N.C. Gen. Stat. Ann. § 74-89 (imposing two-year delay on issuance of mining permit from filing of application); 34 Pa. Cons. Stat. § 722(c) (prohibiting uranium mining on Pennsylvania Game Commission land); Vt. Stat. Ann. tit. 10, § 6083(c) (requiring legislative approval prior to agency consideration of application for uranium mining or processing).

for specific purposes; it pointedly did not. Or Congress could have authorized the NRC to declare particular areas or parcels to be outside States' normal and full regulatory powers; it did not. The procedure petitioners propose here is flatly inconsistent with the very federal legislative scheme it purports to enforce.

Petitioners' reliance on *Skull Valley Band Of Goshute Indians v. Nielson*, 376 F.3d 1223 (10th Cir. 2004), is misplaced. The claim in *Skull Valley* involved state action (and federally regulated activity) dramatically different from those here. Utah had adopted a set of coordinated measures designed to obstruct the construction of a waste management facility by banning its construction or attaching onerous conditions, and by imposing special restrictions on the use of instrumentalities of commerce—state roads—to carry nuclear waste to the facility. *Id.* at 1245-54. The Utah planning, licensing, and road access provisions all targeted "the transportation and storage of [spent nuclear fuel]," *id.* at 1245, both AEA-regulated activities. Affirmance in this case does not imply approval of efforts like Utah's, and, should a case like *Skull Valley* arise (and be resolved differently in lower courts), this Court will have ample tools to protect the federal interests involved. There is no need to stretch preemption to an area Congress deliberately did not touch, and create a problematic gap in health and environmental protections, in order to address scenarios like *Skull Valley*.

Nor does *Entergy Nuclear Vermont Yankee, LLC v. Shumlin*, 733 F.3d 393 (2d Cir. 2013), support petitioners' position. That case involved Vermont laws that directly regulated whether a nuclear power

plant could continue to operate—a quintessential AEA-regulated activity. The *Entergy* court concluded that new and different conditions Vermont has imposed on the plant's continued operation were grounded on radiological safety concerns; the court analogized the Vermont statutes to a "'state moratorium' on nuclear energy 'grounded in safety concerns.'" *Id.* at 428 (quoting *Pacific Gas*, 461 U.S. at 213). Regardless of whether the *Entergy* opinion properly interpreted the Vermont laws at issue there (or even correctly applied the AEA to state power plant licensing, *see* 733 F.3d at 435-36 (Carney, J., concurring)), *Entergy* is not fairly comparable to this case, where Virginia is regulating a subject matter the AEA quite conspicuously leaves to the States.

Although Congress is well aware of the potentially significant health, environmental, and economic effects of uranium mining—and of the national interests that might be served by asserting federal authority even over this traditional state area—it has chosen to leave to state and local governments the regulation of conventional uranium mining on private land. Congress could regulate uranium mining by displacing state law broadly, or, as with SMCRA, by imposing preemptive minimum standards, leaving States free to regulate more stringently. But Congress has chosen to do neither of these things, opting instead for a regime under which the NRC can permit mining on federal land and can obtain uranium deposits on nonfederal land by contract or condemnation, whenever the responsible federal agency deems such actions necessary to effectuate the Act's purposes. Honoring Congress's considered choice in the AEA means rejecting petitioners' preemption claims here.

Petitioners' "obstacle" preemption theory (Pet. Br. 54-59) also lacks merit. Congress was aware that leaving mining regulation to the States would necessarily bear upon the availability, timing, and cost of uranium that might otherwise be mined from nonfederal lands. The decision not to preempt state law, even as Congress preempted state regulation of other aspects of the production cycle, was a deliberate decision to uphold States' traditional authority despite those costs. The AEA's provision for bringing real property containing uranium deposits into federal ownership "to the extent [the NRC] deems necessary to effectuate" the AEA's purposes, 42 U.S.C. § 2096(b), as well as its provision for the NRC to administer mining on federal land when the federal agency "deems" it necessary to effectuate the AEA's purposes, *id.* § 2097, together ensure that leaving state authority in place will not unduly impede those purposes. The AEA does not establish a rule that States must allow any activity that conceivably advances nuclear power generation: To the contrary, Congress obviously recognized that the States' exercise of the authority over the areas left to them under the Act could have implications for particular nuclear projects, even the construction of a nuclear power plant. *See Pacific Gas*, 461 U.S. at 216 (finding retained authority "easily sufficient to permit a state so inclined to halt the construction of new nuclear plants by refusing on economic grounds to issue certificates of public convenience in individual proceedings").

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The vitality of our system of federalism depends just as much on honoring Congress's choices not to

displace state law as it does on striking down acts of Congress that interfere with state prerogatives. *Cf. Bond v. United States*, 134 S. Ct. 2077, 2090-93 (2014). Here, Congress's choice not to interfere with States' authority to regulate conventional uranium mining on nonfederal land could hardly be more clear. The AEA establishes an elaborate regime addressing various phases of the process of producing nuclear energy after uranium has been removed from its place of deposit, and it provides means for the federal government to facilitate development of source materials when the responsible federal agency deems necessary it to effectuate the Act's purposes. But the Act does not limit States' longstanding authority to regulate the mining of uranium on nonfederal land. Petitioners' strained efforts to disturb that judgment should be rejected.

CONCLUSION

The Fourth Circuit's judgment should be affirmed.

Respectfully submitted,

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